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FutureMusic®

Issue 397
Making the future since 1992

Technique and technology for making music

ABLETON PUSH

Live comes out-of-the-box – is this the ultimate portable DAW?

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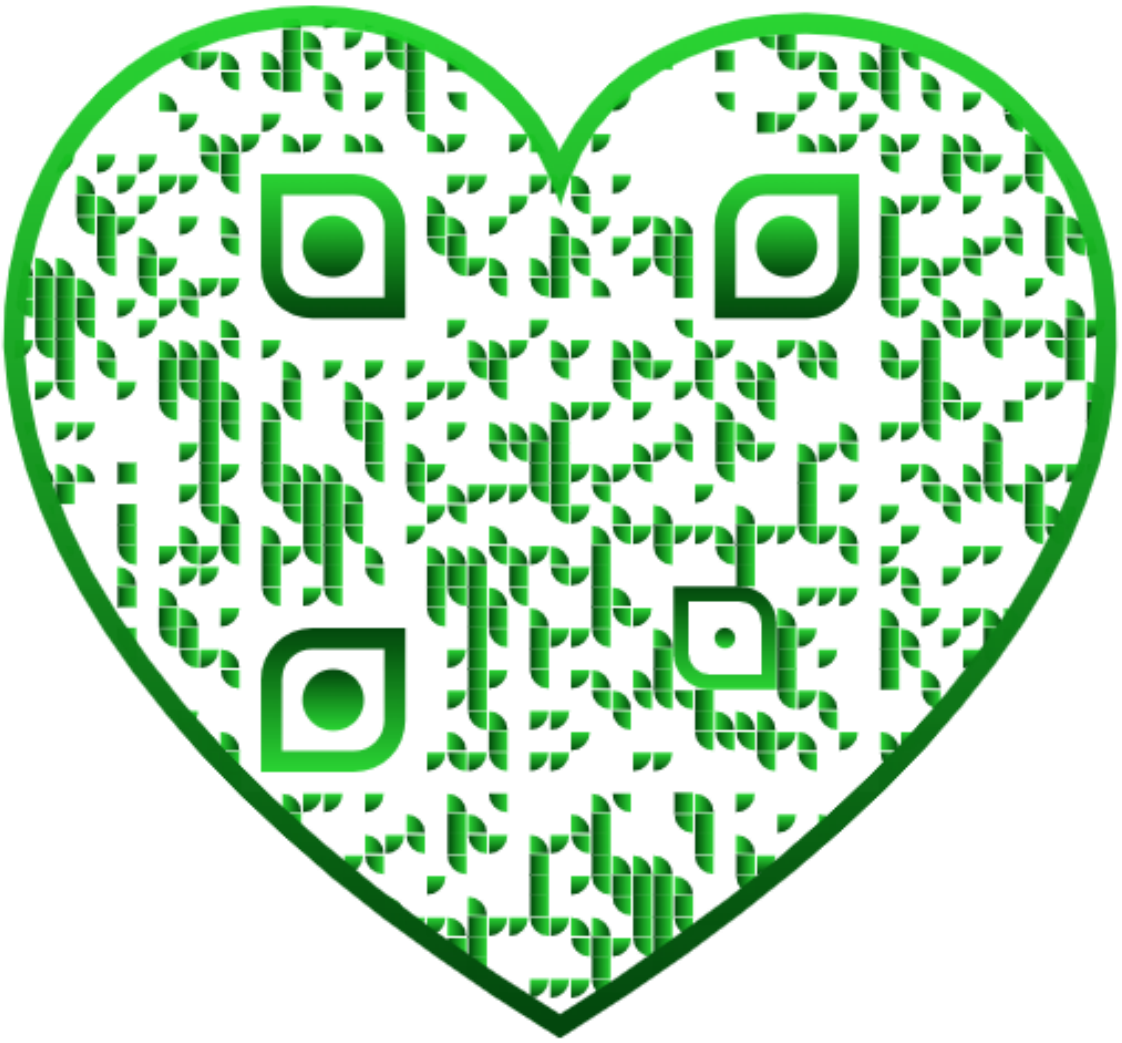
- Matthew Herbert
- Bright & Findlay
- Braids
- Nabihah Iqbal
- JFDR

DITCH THE LAPTOP

Get free of the screen with our essential guide to a no-computer setup

FUTURE



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Thinking outside the box

Whether it's better to work in- or out-of-the-box – ie with software plugins or physical hardware – has long been one of the great debates among electronic music makers. Predictably, despite what advocates of one approach or the other might say, the real answer is that whatever way of working suits you best is the one to go for.

In 2023, however, the line between the two is increasingly blurring. Gear like this issue's cover star – Ableton's newly standalone-capable Push – as well as Apple's brand new iOS version of Logic Pro, are taking the traditional DAW workflow away from the studio, offering new ways to be creative that don't mean being bound to your laptop screen.

It's these approaches we're exploring this month. Whether you want to be free of your DAW, work on-the-go or simply mix up your workflow, we're here to help you discover a new and fresh approach.

We hope you enjoy the issue.

Si Truss, Editor-In-Chief
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Matthew Herbert

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Nabihah Iqbal

INCLUDES VIDEO

The Ninja Tune artist explains how several setbacks helped shake up her process for excellent new LP *Dreamer*

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AMBIENT SOUNDS PT.1
- '90s Ambient (562 samples)
- Ambient Dawn (490 samples)

AMBIENT SOUNDS PT.2
- Majestic Bells & Mallets (444 samples)
- Spring Reverb & Tape Delay (533 samples)

ATMOSPHERES & BACKGROUNDS
- Atmospheric Beds (369 samples)
- Noise, Crackle & Hiss (512 samples)
- Sounds of the City (371 samples)

BASS BUNDLE
- Amped-Up Bass (234 samples)
- Sub-Frequency Grooves (256 samples)

ESSENTIAL DRUMS
- 808 and 909 (39 samples)
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- Ultimate Kick Bundle (505 samples)
- Ultimate Snares & Claps (676 samples)
- Vintage Drum Machine Hits (548 samples)

FOUND FAVOURITES
- Mechanical Sounds (390 samples)
- Out There FX (500 samples)
- Studio Noise (234 samples)
- The Edge Of Noise (512 samples)
- The Sound Of Water (375 samples)

FUTURE DRUMS
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- Digital Percussion (502 samples)
- Electro FX (321 samples)
- Granular Drums (499 samples)

FX & TRANSITIONS PT.1
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- Total Transitions (260 samples)

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- Funk Keys (279 samples)
- Hip-Hop Drum Machines (387 samples)
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- House & Techno Stabs (213 samples)
- Jacking House (518 samples)
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- '80s Pop Drums (197 samples)
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TRANCE & RAVE
- Classic Breakbeats (371 samples)
- Rave Synths (524 samples)
- Trance Tools (537 samples)

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- '70s Synths Pt 2 (192 samples)

'80S SYNTHS
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- '80s Synths Pt 2 (279 samples)

'90S SYNTHS
- '90s Synths Pt 1 (414 samples)
- '90s Synths Pt 2 (411 samples)

'00S SYNTHS
- '00s Synths Pt 1 (308 samples)
- '00s Synths Pt 2 (188 samples)

DRUM HITS
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- Rims 'n' Things (549 samples)
- Resonator Percussion (502 samples)
- Hats, Cymbals & Gongs (280 samples)

LO-FI TOOLS
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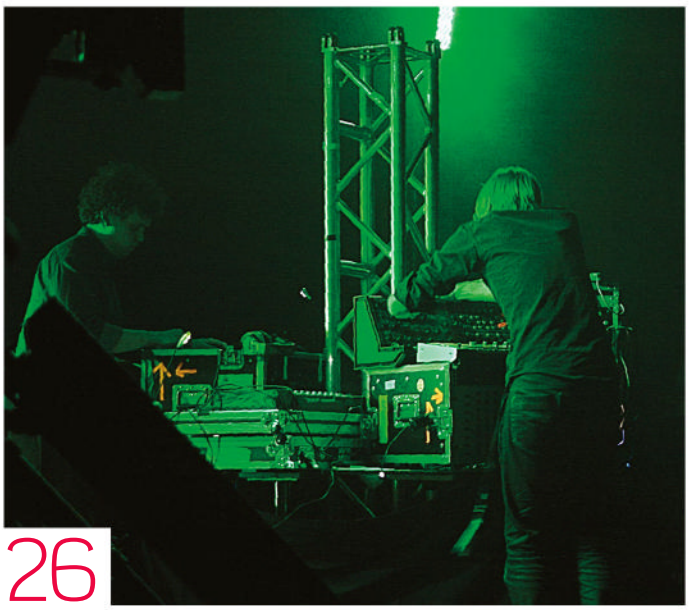
- Tape World (499 samples)
- Lo-fi Acoustic (277 samples)

ETHEREAL FX
- Digital Nature (255 samples)
- Clouds & Air (496 samples)

TECHNIQUE **& FEATURES**



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Lose the Laptop

Get free of the screen as we show you how to create a hands-on setup with less focus on a computer

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Apple releases Logic Pro for iPad

At last, Apple has released the long-rumoured Logic Pro for iPad, bringing its flagship DAW to a multitouch device for the first time.

First impressions are that, as you'd expect, this takes some design cues from the iOS version of GarageBand, but goes further by offering a range of 'pro' features. Diving into the detail, an all-new sound browser puts all available instrument patches, audio patches, plugin presets, samples and loops in a single location, and you can tap any sound to audition it before you add it to a project.

And there's certainly plenty of content to play with: Logic Pro for iPad ships with 100+ instruments and effects, with the multitouch-capable interfaces letting you bring them to life. One of the instruments, Sample Alchemy, is brand new; an evolution of the existing Alchemy synth, we suspect, this enables you to "transform any audio sample with the tap of a finger".

Plugin Tiles, meanwhile, put the most useful controls for any instrument or effect at your fingertips. Other potential highlights include Beat Breaker, a new time and pitch-morphing plugin, and iPad-friendly variants of Logic Pro's Quick Sampler, Step Sequencer and Drum Machine Designer. The Live Loops feature is here too, for those who want an alternative to the timeline-based arrangement view.

Unlike GarageBand for iOS, Logic for iPad includes what Apple describes as a Pro Mixer. This offers channel strips, volume faders, pan controls, plugins, sends and automation features, and enables you to move multiple faders at once.

Crucially, Logic Pro for iPad is compatible with the Mac version via what Apple calls its "roundtrip capabilities". Audio export options are available, too, including compressed, lossless and individual track stem. GarageBand for iOS projects can be opened in Logic Pro for iPad, too.

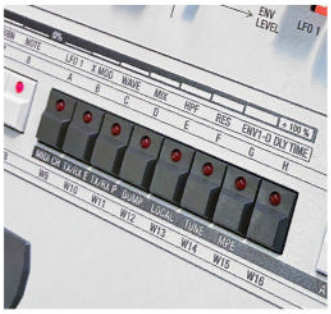
Logic Pro for iPad is out now priced at £5 a month or £49 a year. It'll run on any iPad with an A12 Bionic chip or later, and iPadOS 16.4 or later – so it's not just iPad Pro owners who'll be able to get involved.

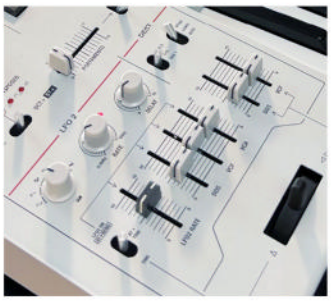
The pricing won't please those opposed to subscription models, obviously, but for people who want to make this their primary music production software, it's not a huge amount to pay. And the big question: is there a demand among Apple fans for a pro-grade, end-to-end iPad DAW? Time will tell. FM

Super Gemini is a multi-timbral, binaural beast

We've not been shy about our love of UDO's Super 6, and now the Bristol brand has followed it up with a second synth in the range – the Super Gemini. Billed as a "bi-timbral analogue-hybrid powerhouse", this has a dual-layer, bi-timbral design and promises to give you a huge amount of control.

The "spectrally rich digital hardware oscillators" are said to be unique, and offer the likes of wave morphing, cross and ring modulation, bi-directional sync and more. These feed into an all-analogue signal path that's inspired by vintage instruments from the past, creating an instrument that's said to fuse a state-of-the-art FPGA digital architecture with a typical voltage-controlled synth.





UDO is making a big deal of the Super Gemini's dual levels of synth control, which let you tweak, split and sequence multiple timbral layers. The true stereo signal path means that the 20 voices can be twinned to form 10 'super voices', with the left and right channels each getting their own complete synthesiser voice. This so-called binaural synthesis method promises to deliver both a warm analogue tone and dynamic, spatial sounds.

Where the Super 6 played like a modern spin on vintage Junos and Junos, the Gemini takes a little inspiration for Yamaha's behemoth CS-80. The most obvious point of comparison is in the inclusion of a front panel touch strip, which can facilitate diving pitch bends and sweeps. But in action, there's also a clear similarity in sound between that vintage machine and this modern one. With 20 voices – which can be used in two distinct timbral layers – Super Gemini is a rich and complex machine, easily capable of stacked Vangelis-like chords, mammoth soundtrack drones or arena-filling pads.

Build quality of the Super Gemini appears top-notch – it's made entirely from aluminium and steel – and you get both a 61-note semi-weighted keyboard with polyphonic aftertouch and a ribbon controller. There are 256 performance and patch slots, 64 interchangeable waveforms and 16 sequences. More details to come. **FM**

Reason's Objekt promises a new world of sounds

Reason Studios has taken the wraps off Objekt, its new physical modelling synth. It's available now to use inside Reason and in other DAWs via the Reason Rack plugin.

Designed to emulate real-life acoustic sounds, Objekt promises to "open the hood on physical modelling" and present it like a synth. As well as helping you create bell, mallet, percussion and string sounds, you can also use it to produce natural textures, organic pads and more.

Objekt gives you three resonating objects to work with. These form the basis of your sounds, and can replicate the likes of strings, skins and bells. The Exciter section dictates how the instrument is played, and there are plenty of parameters that can easily be tweaked to create entirely new tones. More than 500 presets come included, and you also have a randomiser for fast inspiration.

"Objekt is the most innovative instrument we've ever made," says Reasons' Mattias Häggström Gerdt. "It opens the door wide to a whole new world of sounds that simply can't be made with anything else… Where you end up may sound familiar or like an imaginary instrument that doesn't exist. Until now."

This being a Reason device, you can also combine Objekt with other modules and get more experimental. Objekt is included with the Reason+ subscription and also available separately priced at $99/€109. FM

Roland's S-1 Tweak: like a polyphonic SH-101

Roland has added another synth to its Aira Compact range. The S-1 Tweak Synth takes inspiration from the classic SH-101 and joins the T-8 Beat Machine, J-6 Chord Synthesizer and E-4 Voice Tweaker in the family of diminutive instruments.

While the S-1 uses Roland's Analog Circuit Behaviour (ACB) technology to recreate the SH-101's sound, it goes beyond its monophonic design to offer four voices of polyphony. And, while the simplicity of the 101 has been retained, there are a number of new sound design features, too.

You get dedicated oscillator, envelope, filter and LFO sections, and effects with dedicated knobs. Effects include choruses, delays and reverbs, some of which are derived from classic Roland synths from yesteryear. The 26 multifunction pads, meanwhile, can be played like a keyboard or used for step sequencing.

If the square, saw, sub and noise oscillators aren't enough, you can also use the pads for drawing your own shapes. Osc Chop lets you cut waveforms into sections to create metallic timbres, and also use the noise osc as an independent riser to create sweeps and pulsing effects.

The 64-step sequencer offers up to 64 patterns, and classic creative features such as motion recording, adjustable probability, the ability to create sub steps, velocity control, shuffle and portamento are here, too. The inclusion of a D-Motion controller means that you can tweak sounds simply by moving the S-1 around, and you can throw in fills and other moments of improvisation inspiration with the Step Loop function.

The S-1 Tweak Synth is available now priced at $200. FM

Erica Synths' Steampipe is a physical modelling polysynth

Erica Synths is offering something a bit different with Steampipe, which is a fantastically named 'true' physical modelling synth with eight voices of polyphony and no conventional oscillators.

We've seen plenty of physical modelling instruments in software down the years, but not so many in hardware. Steampipe is designed to mimic the way that sound is generated by wind instruments, strings, pipe organs and more, and has three major sections.

First up, there's Steam, which mimics a musician's lungs and mouth. More specifically, it simulates airflow, with the envelope section determining the force with which air is blown out. DC/noise refers to the sound that's generated when 'blowing out' – this can be replaced with an external audio source if you wish.

The Pipe section, meanwhile, is akin to a flute. It's here that the tone is formed, with the delay box subsection adjusting the tuning and shape. Finally, we have the Reverberator, which is used to add space and ambience.

Steampipe has been optimised for use with MIDI wind controllers but can also be played using a conventional MIDI keyboard. There are plenty of "organic and rich" presets, and you can create all kinds of "sonic imagery" that ranges "from wisps of cloud to fairground band organs, then to industrial horns of the railroad and finally, to massive, otherworldly ambiences." FM

Make Noise's Spectraphon offers power and complexity

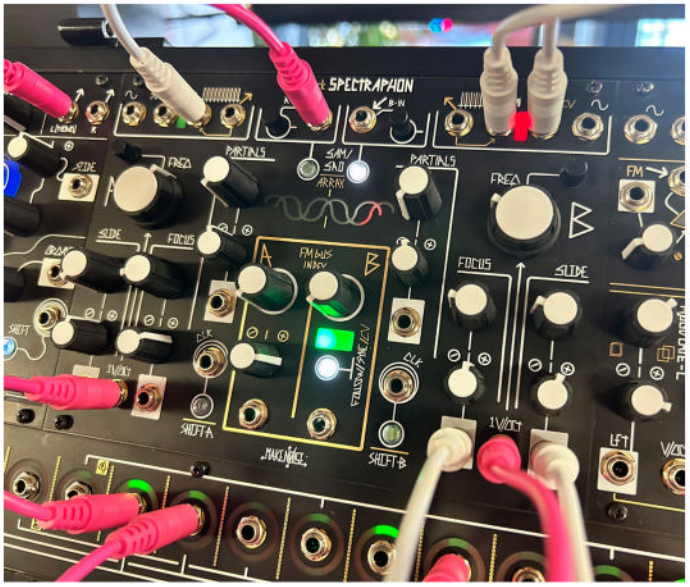
Make Noise's Spectraphon is another collaboration between the US brand and Soundhack's Tom Erbe, who previously contributed to the company's excellent Erbe Verb and Morphagene modules.

Spectraphon is a complex dual oscillator capable of additive, vocoder and spectral synthesis-style sounds. This results in brilliantly bright and characterful digital synth tones. As with the best Eurorack voices, it really comes to life with modulation, with plenty of CV to keep the synthesis techniques and timbres moving. From our demos it seems like another experimental powerhouse from the brand.

The Spectraphon is also the first module to make use of Make Noise's new digital hardware platform.

Engineered by Jeff Snyder and Tony Rolando, the company claims this provides "more I/O at higher resolutions and a lower noise floor than we have ever had access to in a digital module, allowing us to unleash Tom Erbe's DSP code to a previously unattainable degree".

Spectraphon is due to arrive late May/early June, priced at $599. FM



PWM's Mantis: a Wasp-style synth with OSCar-like filter

We're guessing that, for PWM, the launch of its new Mantis 'hybrid-analogue' synth is somewhat bittersweet. On the one hand, it's a product that the company is proud to have created, but the sad news is that Chris Huggett – the legendary synth designer who collaborated on the project – died before he could see it come to market.

PWM's Paul Whittington calls Mantis a "unique-sounding synth" and a "beautiful collaboration", confirming that it's being released with the blessing of Huggett's family. "We are thrilled to bring you our new synth that we are sure will be loved as much as he was!" he says.

Mantis is duophonic and features mathematically generated oscillators and an analogue signal path, both of which are based on Huggett's designs. In fact, Mantis is said to offer a contemporary architecture based on Hugget's classic Wasp synth, plus a filter that takes its lead from his OSCar instrument. There are two oscillators plus a sub-oscillator per voice, with the oscillator drift feature creating random pitch variations between the oscillators.

Each signal path has its own multimode analogue filter, and there are also two LFOs and two independent envelopes. You have a choice of six 'control' modulation parameters, and six 'source' effectors.

Other features include a digital effects section with reverb and chorus, an arpeggiator and a full-size 37-note keyboard with velocity-sensitive keys. We've heard it in action, and it's meaty and powerful, with lots of character, aggressive edge and powerful low end.

Mantis is scheduled to ship in the summer priced at $1,499/£1,349. FM

Arturia's MicroFreak synth gets a Stellar update

Already pretty striking, Arturia's MicroFreak synth now has an even sleeker look thanks to the release of a new limited-edition Stellar version. This gives the MicroFreak a slick black finish, and also adds some "space-age graphics" that are designed to reflect its controls. There are some exclusive new presets as well.

Alongside this – and perhaps even more notably – Arturia has unveiled a v5 firmware update for all MicroFreak owners, including those who purchase the Stellar. It looks like a pretty significant one, too.

You can now import, play back and loop your own samples, and they can be manipulated using the three new granular engines. The MicroFreak's keyboard can be transformed into a S&H modulation source, and the synth's envelopes can now have even shorter attack values for a little extra snap.

Finally, you can now access 512 preset slots, and the factory preset count has risen to more than 300.

The MicroFreak Stellar is available now priced at €349. The v5 firmware update is free for existing users. FM

Oberheim's OB-X8 desktop module is smaller and cheaper

The headline says it all, really. Oberheim has unveiled a desktop version of its stunning OB-X8 synth and, aside from the omission of the keys and paddles, it's pretty much the same as the keyboard version.

With the all-analogue signal path in place, this means that the OB-X8 module should sound just as good as the standard synth. The Arpeggiator and Keyboard Split & Double functionality is here, too, ready to accept instruction from your favourite MIDI controller.

Launched almost exactly a year ago, The OB-X8 takes the best bits of the OB-X, OB-Xa and OB-8 – manufactured between 1979 and 1985 – and packs them into a new eight-voice analogue synth. You get all the presets from those OB classics, plus the ability to combine their architectures to create hitherto unheard sounds.

We called the OB-X8 a beautiful synth that's destined to be a classic in its own right, but bemoaned the fact that, with a price tag of $4,999/£4,799, a lot of people won't be able to afford it. At $3,499/£3,399, the new module isn't exactly cheap, either, but it's significantly more affordable, and won't take up as much space in your studio.

That said, the 61-note Fatar keyboard on the standard OB-X8 is excellent, offering both velocity-sensitivity and aftertouch support. And, if you're going to spend thousands of dollars/pounds on a new synth, you might decide that having something that you can just turn on and play anytime (not to mention take to gigs) is a prerequisite. FM

Elektron turns up the Heat with a new +FX model

Released in 2016, Elektron's Analog Heat offered eight stereo analogue distortion circuits, and could be used for both "enhancing and destroying" your audio. A second-gen version in 2018 offered a few hardware improvements but nothing in the way of sonic improvements, but you certainly can't say the same of the new Analog Heat +FX.

Those eight stereo distortion circuits are still here – as is the stereo multimode analogue filter and 2-band stereo analogue EQ – but on top of that you also get a whole bunch of digital effects. Specifically, we're talking Reverb, Delay, Chorus, Warble, Bits, Compressor and Bass focus.

All of these effects can be re-ordered as you see (and hear) fit, and your patches can be saved in the 512 preset slots. There are modulation options, too: an assignable envelope generator/envelope follower with two destinations, and three assignable LFOs, each with two destinations.

Analog Heat +FX offers an OLED screen, MIDI In/Out/Thru, various audio output and two CV/Expression pedal input jacks. It's Overbridge-enabled and runs as a class-compliant USB audio interface.

Analog Heat +FX costs $999/£999. FM

AJH Synth's MiniMod Keyz looks like a Minimoog for the Eurorack generation

AJH Synth has come up with the nifty idea of combining a selection of its MiniMod modules with the Cre8audio Niftykeyz controller keyboard to create a self-contained synth inspired by the Minimoog. With its walnut end cheeks, the so-called MiniMod Keyz certainly has the look of a Model D, but the truth is that it's actually considerably more powerful.

It offers three VCOs, two shaped sine sub bass generators, a classic 24dB vintage ladder filter, 6dB and 12dB high-pass VCF, dual cascaded VCA, dual contour generators, a glide noise module, a ring modulator, tap tempo VC-LFO and a second multi-function modulation LFO. Phew. And then there's that 49-note synth action keyboard, which gives you CV outputs for both velocity and aftertouch. There's also a five-mode arpeggiator, a two-mode modulation wheel, aftertouch and expression pedal smoothing and an autochord function.

And, of course, this being a Eurorack synth, you also have the option of expanding the MiniMod Keyz with additional modules. The MiniMod Keyz costs £2,795. FM

The microKorg anniversary model is Crystal clear

20 years ago, Korg's microKorg helped to kickstart a trend for affordable, portable synths, and its built-in vocoder gave it an additional layer of hipster cool. To celebrate its 20th anniversary, a new semi-translucent version – microKorg Crystal – has been released, giving you the opportunity to see what's going on inside. The redesigned chassis puts the microKorg Crystal's electronics and internals on display, and the controllers (knobs, dials and wheels) are see-through, too. There's also a stainless mirror-finish front panel that "blurs the limits between you and your instrument and provides a cosmetic impact never seen in any other musical instrument." Yep, all that from a front panel.

The wooden end cheeks have been given the heave-ho in favour of aluminium side panels, while the supplied transparent vinyl carry bag ensures that, even when the microKorg Crystal is being transported, it's visible (though whether you'd always want your synth to be on display when you're out and about is another question).

We're told that the design of the microKorg Crystal "'crystalizes' the energy and feelings of the Korg team behind its birth," and you may be able to buy one for £539. We say 'may' because this will be a limited edition release, with units available in a couple of months.

Given that you can pick up 2016's microKorg S for considerably less than this, you may wonder if the Crystal is worth the cash, but it certainly looks nice. You might also consider the microKorg XL+, which offers increased polyphony and a different sound engine. FM

Fila Brazillia
Maim That Tune

Pork Recordings, 1995

Fila Brazillia – the groovesome twosome of Steve Cobby and David 'Man' McSherry deserve their flowers. Over the course of a crate's worth of albums, and a "skip-full" of singles and remixes, they helped shape, soothe and shock the UK electronic music scene.

For their second LP, at the halfway point of the nineties, they were merrily mashing up the funny bits they saw poking out of techno tracks, hip-hop, house, Bill Hicks monologues, and dusty old classical records. If it amused or moved them, it was going in the sampler.

From the clap-your-hands-out-and-stomp-your-foot, pun-heavy title, through to the in-joke track names, it was all about their personal sense of humour and style. Pieced together in Cobby's bedroom studio, the pair bashed out tracks that tickled them, live on the desk. Turning out unique versions and, "keeping the ones that weren't shit", for the album.

"If you started a track, you had to finish it," says McSherry. "We didn't have automation or total recall. So, you'd have a tune on the desk for two days. And then stick it onto DAT, and then that's it. You could never get it back. That's why there's mistakes, and some of the mixes are not quite right, but, you know?"

Yeah. That all adds to the fearless charm. Omelettes/eggs. These brave pioneers walked badlands barefoot so you could run in comfy shoes, young padowan.

Musically, grooves were inspired by the 16C swing of Underworld, the Dust Brothers' brass swells and the straight up vibes of The Sabres Of Paradise. If inspired by anyone, of course. Fila almost didn't have time to fully absorb the goings on of contemporary clubland, as they were running a musical sausage factory for Pork Recordings.

"We couldn't get that skin on quick enough," chuckles Cobby. "We were working so fast. We put out three albums in 18 months. We were prodigious. And, you know, the planets had aligned."

The celestial dance continues today, as them Fila boys have just dropped the 30-year deep *Retrospective Redux 90 – 22*. Enjoy yer flowers, fellas.

Words by Roy Spencer

Track by track with **Steve Cobby and David 'Man' McSherry**

The huge news from the Fila camp is that the boys are back in business, blessing us with the near career-spanning 'best of', *Retrospective Redux 90 – 22*. Covering all their years of evolution, from Cobby's bedroom to the globe-trotting live band, it's not to be missed.

Steve also has plenty to shout about on the solo tip, as his latest artist album, *The New Law Of Righteousness*, also hit shelves. To bag your copy of this future classic, hit his Bandcamp for the digital (and hopefully soon, vinyl).

Cobby: "I miss that setup for making music. I still think that the Atari was more solid than any sequencer that I've ever had since. Somebody did try and explain it to me, like, mathematically. But, it was [Richard] Dorfmeister who said that you're never gonna get something as solid as an ST, because it was feeding parallel information rather than serial. But, that was the setup for about the first three or four of our albums."

Dave Yang & Steve Yin De-Swish T' Swish

Cobby: "The title came after we were doing the decorating and got paint on one of them swish curtain rails that glides, although the gliding had stopped because it was covered in emulsion. So, we had to 'de-swish' the rail by scraping all the paint off."

McSherry: "And for the 'Dave Yang & Steve Yin' thing, you know, we just elaborated on us as two painters and decorators with a little van parked outside with them names on the side. We should have gone down that road."

Cobby: "So, as we were de-swishing the swish rail, the name just came to us. You know what we're like with coming up with titles, if it made us laugh. It ended up on the board. And then, when it comes to finishing a tune, you'd just be like, 'What tune fits with what title?'"

McSherry: "And it just made sense for that track to come first on the album because it's like a little gentle introduction."

A Zed And Two L's

Cobby: "It's the most listened to Fila tune on Spotify, because it's featured in the most chill out playlists. It was in Chris Morris's *Jam*, too.

"It was mastered at Jah Tubby Sound. We used them for all the early stuff. Keith – what a top boy. It was in Tower Hamlets – proper ghetto. I did a couple of attended cuts there. Then realised it was pointless, and just left Keith to do it.

"I remember making the track on New Year's day because I'd been out at Room Nightclub. When I got back to the flat/bedroom/studio I didn't want to go to sleep because of 'sleep preventing substances', so got into working on the tune.

"Time just started to flash past, and everything came together. And then I got the idea about leaving the delay time exactly the same, but changing the tempo of the track so that the delay went from a quarter to a triplet, like a Fibonacci sequence or something."

Leggy

McSherry: "*Leggy* was a very popular track because it was kinda trip-hop, I suppose. It ticked all the trip-hop boxes. So, it was popular with everybody who had us down as a downtempo group as well.

"Also, back then, we just used a pure sine wave for bass. On the Akai – just a pure sine wave. Which sounds brilliant, as a bassline, you know, on a good rig. But, when you play it on something that's not that good, the bass just disappears, because there's no harmonics. I realised that a few years ago. Like, it should have been distorted a bit…

"When I was doing a course in Salford in '93 to '95, I remember saying to one of the tutors that we did that, and he said that was insane."

Cobby: "We were much more interested in what you're not meant to do. That's where the surprises are."

At Home In Space

Cobby: "Ooh, lovely track, that. And that was Man, bringing them samples in – Vaughan Williams' *The Lark Ascending*. The thing that we used to like doing was trying to shoehorn disparate elements into the same track, to see if we could do it. Like, why couldn't we get Vaughan Williams in this one? Or Ramsey Lewis. Or whatever, you know?

"That was a challenge that we liked to set ourselves, just to see if we could. That chalk and the cheese on the same track. But, the bulk of that track for me is the flute. That's what sets the tone for that whole beautiful thing."

McSherry: "The flute line is a flute sample played on a keyboard. We played that, believe it or not."

6ft Wasp

Cobby: "That title was Man's call. When we made it he said, 'Fuck me! It sounds like a six-foot wasp'. Which, obviously, you know, had us falling about laughing.

"This is also the track with the most teeth on there, I think. When people used to say, 'Oh, Fila is really chill out and downtempo'. I'd say, 'Go listen to '6ft Wasp, and then come back and tell me that we're a downtempo outfit'. I didn't like the idea of being pigeonholed.

"So, yeah. This one was the odd kind of muscular track. And I suppose that's the nearest that there is to anything of that kind on the album."

McSherry: "This is also the one sampling Bill Hicks, talking about advertising."

Cobby: "God bless him. May his soul rest in peace. Yeah, that was not long after I'd seen him appear on Channel 4 in the middle of the night. He came on and just blew my mind, and he became an absolute hero, immediately, and I couldn't wait to use him on stuff, to be honest."

Slacker

McSherry: "This is definitely influenced by Underworld. With the fact that it's a long tune, and has that

kind of 16C swing on it. It's also the most techno track on the album. I think it's the one that stands out as being odd in terms of the rest of the record. But, it's got a Hossam Ramzy sample in it, for that sort of percussion tambourine thing? So, that brings it away from just being a purely techno track and gives it that organic element."

Cobby: "Yes. Hossam Ramzy's *Rhythms Of The Nile*. We liked to get that balance between organic instrumentation and the synth world. It was like metric and imperial, you know? That was analogue and digital.

"We were super analogue, when we were growing up – guitars, bass, drums; proper bands. And then, as we got into machines, we incorporated them. We always used the best bits from both them worlds. They were all colours to be used."

> "WE WERE SUPER ANALOGUE, WHEN WE WERE GROWING UP – GUITARS, BASS, DRUMS; PROPER BANDS" – **COBBY**

Harmonicas Are Shite

Cobby: "I got a harmonica for Christmas. I played it, and we sampled it. The title is just us dissing it. I'm amazed we managed to use it, the first time. God bless samplers.

"That was it. Just stand in front of a sampler and like, play a gob iron in for 10 minutes. And then you get things in there you can use. You know, pitch a few notes up. A bit of truncation."

McSherry: "Then there's live dub-style effects on the little guitar stabs in there. It's super dubby, this one. It's all getting delayed and reverbed and muted."

Cobby: "I was listening to vast amounts of Studio One, because Porky, who I was living with, had a fantastic reggae and dub collection. And the thing I got from dub was this idea that the studio actually becomes an instrument, and you drive mixes, which I thought was fantastic, you know? That dub influence was always there, early doors."

Extract Of Pineal Gland

Cobby: "That's the one with the least things happening on it, I think."

McSherry: "I'm doing my best Keef impression on the guitar. And then it just goes down to just that. It's like, massive chunks of silence. Actually, not silence. Desk humming."

Cobby: "It's one of my least favourite tracks. It just doesn't sound finished. We took that out of the oven before it was baked properly."

McSherry: "It gets there, though. It starts off unfinished. And then there's all that sort of stuff from the [Korg DW-8000] DW. And that descending stuff. Like that Japanese vibe riff that comes in. It's a lot longer than I remembered. It's about eight minutes long. The second half of it's good.

"The bassline is a sample. And the other thing I noticed is that it's the first time that our signature drum sound appears. You know, Steve on the drums, in the next room, a small Premier kit, one mic. We'd then sample whole sections into the [Akai S1100] 1100 to construct a drum track."

Subtle Body

Cobby: "I remember Man coming to the studio with these three chords. You had a piano at home, didn't you? He played them and I was like, 'Well, they're exquisite. Let's put them down.'"

McSherry: "From the Wurlitzer electric piano. That first appeared on *Harmonicas Are Shite*, then it was used on loads of tracks and remixes."

Cobby: "Yeah, I bought that off [Be Bop Deluxe's] Bill Nelson. He moved to Japan and sold a lot of his equipment. I got it for £150. It's worth like two grand now. I think he regrets it, and apparently wrote *Ships In The Night* on it."

McSherry: "I remember hitting the Wurli really hard, so it clunked. And then you grabbed it into an [Lexicon] LXP on a sort of infinite reverb/freeze reverb thing. Then there was the [Korg] M1 bell.

"But, more than the bell thing was that loop. But, we kept adding an extra note. So, the loop gradually builds up and builds up and gets more complex, and then it goes off again. It was like a maths experiment, in a way. And it's fucking so zen!"

Cobby: "And we always liked to finish an album off with something a little bit more ambient, as well." FM

In the studio with Cobby and McSherry

McSherry: "The studio was on the top floor of Albion Street [in Hull] at this time, in the small bedroom. It had a really distinctive drum sound. We'd bought a small Premier kit.

"We were also using an Atari ST and C-Lab. Then it was live samples, running through the mixing desk to DAT, with dub-style effects actually on the desk."

Cobby: "And then we just recorded arrangements by recording a pass on the mutes. It would be different every time. I miss that. It was like you're driving the mix, more.

"The Cheetah MS-6 was heavily used. The Korg M1 synth was used loads for its bells. Then the Korg DW-8000. We got that in about '86 and every LP had a bit of that on. There wasn't a lot of outboard"

McSherry: "We had the Roland MC-101, and I probably had my Roland W-30 sampling workstation at that time. And a Juno and Roland JX-3P. And then all the sampling was done in the Akai S1100."

WANT TO KNOW MORE?

For all the latest links and listens, including the new *Retrospective Redux 90 – 22*, head straight to: **filabraz.bandcamp.com**

LIKE IT? TRY THESE...

Fila Brazillia
Retrospective Redux 90 – 22

Lose yourself in a world of silly track names, career-best beats, and brand new material in this trip through the four epochs of Fila.

ADD THESE TO YOUR PLAYLIST:
'Airlock Homes', 'Madame Le Fevre', 'Toro De Fuego'

The Dust Brothers
Fourteenth Century Sky E.P.

This pre-Chemicals Chemicals extended player included some inspiring brass swells Cobby and Man were taking note of back in '94.

ADD THESE TO YOUR PLAYLIST:
'Chemical Beats', One Too Many Mornings', 'Dope Coil'

Fila Brazillia
Subtle Body

New EP giving the *Maim...* track another go around the sun. Also features a deep listening live house jam from the duo from back in 1996.

ADD THESE TO YOUR PLAYLIST:
'Room '96 (Live Version)', 'The Light of Jesus', 'Nightfall (Instrumental)'

Steve Cobby
The New Law Of Righteousness

The Cobbler's 2023 solo album, in which the marvellous musical maverick continues to poke the bear of beats and bleeps.

ADD THESE TO YOUR PLAYLIST:
'Viva Melvin', 'Tang Ping', 'The World And Your Place In It'

Hossam Ramzy
Rhythms Of The Nile

Percussion masterclass from the Egyptian musician and composer. And a source of samples and inspiration for the Fila folks.

ADD THESE TO YOUR PLAYLIST:
'Masmoudi', 'Maqsoum', 'Malfuf'

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ALBUM OF THE MONTH

patten, Mirage FM

555-5555

Electronic musician, visual artist and lecturer Damien Roach has spent close to two decades experimenting with sound, images and ideas under the alias patten. His latest project, *Mirage FM*, is perhaps his most experimental yet: it's the first album to be made entirely from samples produced by generative artificial intelligence.

The samples in question were created with an AI-powered text-to-audio sound generator called Riffusion. Type in any prompt that you can think of – anything from "electric guitar solo" to "serialist G-funk theme tune for '70s cop show" – and Riffusion will begin playing a short, looped clip based on the prompt you've entered. Though the sounds it produces are garbled, lo-fi and often unrelated to the text input, the results are still fascinating.

After spending several late nights feeding the app with a variety of prompts, he patiently combed through the results to find sounds that caught his ear. These were then arranged, manipulated and stitched together in software to produce *Mirage FM*. Roach's brief manifesto for the record reads "crate-digging in latent space", likening his process to the way a producer like DJ Shadow or Madlib might rifle through crates of vinyl, hunting for samples with which to craft a beat: except Roach's sample-digging didn't take place within the four walls of a record shop, but instead the digital field of infinite possibility opened up by AI.

The 21 tracks that make up *Mirage FM* are captivating, entirely unique and disorienting in their strangeness. Each song is a marvel of oddity, but familiar genres are discernible beneath the mirage: there are bizarre approximations of aqueous techno on *Drivetime*, lounge jazz on *Fade*, and sultry R&B on *Where Does The Time Go?. Alright* could be an '80s ballad that's been sliced up Dada-style and ran through a bitcrusher, while *Walk With U* sounds like what an extraterrestrial might offer us if we tasked it with reproducing old-school grime.

Testament to Roach's skills as a producer is his ability to recontextualise Riffusion's disjointed output into tracks that feel somewhat coherent, using carefully applied audio editing and effects processing to create mini-narratives in each track, moments of tension and release that help lend Riffusion's jumbled miniatures a recognisable shape. He's perhaps ideally prepared to take on Riffusion's head-scratching source material, having spent a career producing abstract, leftfield beats that turn conventional musical structures on their head.

Matt Mullen

ADD THESE TO YOUR PLAYLIST

Walk With U, Bliss, Fly

VERDICT 8.5

ON OUR PLAYLIST

ALBUM

K-Lone, Swells

Wisdom Teeth

Cape Cira, the debut album from Wisdom Teeth boss K-Lone, made quite an impression when it landed in 2020. A hazy concoction of polyrhythmic synth mallets and artificial birdsong, its balance of catchy melodies and abstract rhythms made for the perfect soundtrack to a weird summer of lockdowns. *Swells* is an intentional departure from that record, more aligned with the club-focused work of the producer's various EPs and singles. While it lacks the consistent aesthetic of its predecessor, there's no drop in the quality of the production. Across 10 tracks K-Lone deftly balances elements of house, techno, garage, dub and synth pop, all unified by bright, summery synths and rattling drum grooves largely pulled from a Roland CR-78. *Si Truss*

TRACK

Natural Wonder Beauty Concept, Sword

Mexican Summer

Natural Wonder Beauty Concept sees a meeting of two of our favourite ambient-leaning producers of recent years. The first is DJ Python, whose 2020 album *Mas Amable* was a unique mix of lightweight IDM electronics and grooving reggaeton rhythms. He teams up here with Ana Roxanne, one of the leading lights in the current resurgence in US ambient music. *Sword* is the first product of their collaboration, ahead of a full album this July. It's sparse and dreamy, driven by Roxanne's distinctive ethereal vocals but more rhythmic than her usual work. Simple synth lines and stuttering beats have the feel of a track that could either fall apart or burst into life at any moment, whilst never quite doing either. It's understated, but a strong start from the pair, and enough for us to be excited to hear the full album. *Si Truss*

TRACK

Beverly Glenn-Copeland, Africa Calling

Transgressive

Africa Calling is the first track from 79-year old vocalist and synthesist Beverly Glenn-Copeland's first album in 20 years, following his late-career resurgence after the 1986 album *Keyboard Fantasies* was reissued in 2017. Heavily influenced by West African percussionists, the track is a lush mix of acoustic percussion rhythms, delicate keys and Glenn-Copeland's distinctively rich vocals. *Si Truss*

RECOMMENDED

Anthony Naples, orbs

ANS Recordings

© Jenny Slattery

ALBUM

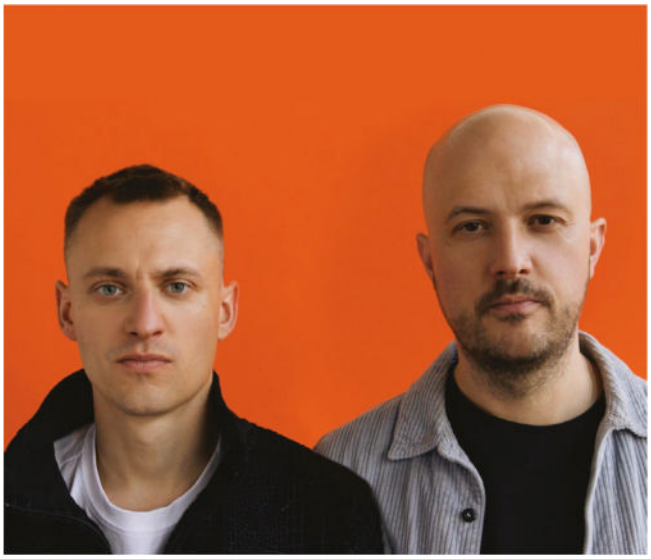
Over a decade into his career, New York's Anthony Naples has cemented his reputation as one of dance music's most interesting artists. Whether producing rugged club tracks like 2001's *Pez Anthem* or the more ambient tracks of his earlier LPs, Naples is adept at toying with the framework that underpins club music. The latest LP, *orbs*, finds him in a meditative mode again. The bulk of the album sees Naples pairing sparse electronic textures with loose bass and synth lines and crunchy, almost trip hop drums. Where it shines though, is in his ability to balance abstract soundscapes with solid melodies and progressions, as on lead single *Silas*, where a throbbing bass and broken-sounding drums lead to a delicate piano line, or the submerged after-hours sound of *Strobe*.

Si Truss

VERDICT 8.0

Overmono Good Lies

XL



ALBUM

It's tempting to compare Overmono with fellow UK duo Bicep. Both have a sound that leans heavily on '90s dance, distilling rave breaks and sampled synths into modern club tracks. Both are responsible for some genuine anthems too – Overmono's *So U Kno* isn't quite as ubiquitous as Bicep's *Glue*, but the two make use of similarly infectious, skippy beats and sampled hooks tailor-made for festival sets. Overmono have less of a revivalist sound though. Spiritually, the duo's music is reminiscent of post-dubstep, channelling UK garage, hardcore and dubstep but without shying away from cutting-edge production flourishes. *So U Kno* makes it onto the album and is still a banger, but tracks like the R&B-inflected *Walk Thru Water* or emotive *Is U* show them at their most interesting. *Si Truss*

VERDICT 8.0

LOSE THE LAPTOP

Computers are brilliant creative tools, but there can be real freedom found in stepping away from the screen. This issue, let's explore the hows and whys of creating a production setup that puts less emphasis on a traditional DAW...

The advent of cheap, powerful personal computers utterly revolutionised music making. Even as electronic music gear became more affordable on the secondhand market throughout the 1980s, the act of actually recording and releasing music still required inaccessibly expensive studio gear. Sure, the likes of Tascam's Portastudio allowed musicians to make rough, lo-fi recordings at home, but it's been the advancement of software DAWs and plugins that has truly made music-making accessible to DIY musicians.

That trend has really accelerated in the 21st century. On the music making front, even free or budget DAWs now contain pretty much all a budding producer needs to record, create and mix full tracks, and a mid-spec laptop can emulate the capabilities of a fully-equipped pro studio. What's more, music making software has escaped the confines of computers to sit on portable devices like phones and tablets, allowing truly go-anywhere creativity.

Interestingly though, all of this advancement has also led to a trend in the opposite direction, as a subset of electronic producers raised in an age of DAWs, plugins and controllers look to de-emphasise or completely remove the computer from their music making.

To see this in action, we only have to look at the changing state of Akai's MPC line. The original MPCs of the late '80s and '90s were the quintessential hands-on production tools – allowing budding beatmakers to not only sample and layer a variety of sounds, but to actively play them, jamming with the hardware like a real instrument. By the late-'00s, however, the MPCs were looking outdated, and were soon overshadowed by the slick, software-based setup of Native Instruments' Maschine.

Within a decade, however – in which Akai released a number of decent, if forgettable controller versions of the MPC – the range veered back towards standalone capabilities with 2017's MPC Live. Far from being a one off, that MPC has laid the blueprint for the whole range. Akai's move no doubt inspired NI to develop the similarly CPU-equipped Maschine+ and, most recently, Ableton has followed suit with its new standalone Push.

NI MASCHINE+ Hardware sequencers offer a compact oasis of creative focus, away from modern internet distractions

Simultaneously, the notably retro approach of CV-based sequencing has had a major revival, thanks to gear like Arturia's Beat- and KeyStep lines and the abundance of modular and semi-modular gear on the modern synth market.

Taken in combination, it means that, more so than at any other time since the turn of the millenium, there are a multitude of options available for musicians who want to create or perform electronic tracks without relying on a computer as a hub.

> THE IDEA OF FREEING YOURSELF FROM RELIANCE ON A LAPTOP IS QUITE UNDERSTANDABLE

DO YOU REALLY WANT TO GO LAPTOP FREE?

On the one hand, the idea of music makers wanting to free themselves from reliance on a laptop is quite understandable. The omnipresence of computers, phones and tablets has massively enhanced our lives in numerous ways. However they can also dominate our time. Between work, leisure, communication and general day-to-day tasks, many of us spend a big chunk of our waking hours looking at a screen. So it's natural to want to minimise screen time when it comes to something as creative as making music.

What's more, the classic computer interface is pretty much the antithesis of a musical tool. Designed to be functional rather than expressive, they can sometimes feel a million miles away from the expressive connection that comes from using a musical instrument or even a tailor-made synth interface.

Performance-wise, there are few things less appealing from an audience's perspective than seeing a musician hunched over a screen, looking like they're checking their emails rather than connecting with the crowd.

The significant counterpoint to this, however, would be that a modern laptop that's loaded up with a contemporary DAW is by far the most capable and convenient portable music making device that's ever been created. What's more, many of the downsides outlined above can be easily overcome with the use of MIDI controllers or hardware instruments.

As with any music making endeavour, there's no need to be dogmatic about it. If the idea of computer-free music making sounds appealing to you, it's worth considering exactly what it is you'd rather do in the physical realm and whether it's best to completely lose your laptop or computer completely, or simply de-emphasise it.

Over the page we'll explore some ways to be musically creative that can entirely sidestep the need for a DAW, but can also be used to create a setup that shifts the creative process elsewhere, whilst still using a computer when it's most convenient.

WHO NEEDS A COMPUTER ANYWAY?

As a startpoint, let's assess what we most commonly use a computer for in a music-making context. In a basic studio workflow, a DAW's duties can be roughly divided into sound creation and performance, sequencing and arrangement, recording and editing, and mixing and effects processing.

Sound creation is probably the easiest process to replicate 'out of the box'. A choice selection of synths, drum machines, samplers or acoustic instruments will do the job – and a few of these synced together may be enough for many live performers with little else needed. Many electronic instruments come equipped with sequencing capabilities of their own too. Although, as discussed over the page, for more complex patterns and longer arrangements, specialist sequencers or DAW-in-a-box tools like Push or MPC Live give far more flexibility.

When it comes to mixing and effects, there are no end of outboard processors and quality hardware mixers on the market. Be warned though, that even if you go down the 'budget route', gear-wise, things can quickly get expensive once you factor in multiple forms of effect treatment. Expect to work around some serious limitations too, when it comes to things like track counts, stereo processing and effect automation.

Recording and editing is where the gap between the convenience of a DAW and non-DAW options is most obvious. While there are many ways to record a track without involving a computer – from hard disc recording to old-fashioned tape – it's at this point that many are likely to abandon a steadfast commitment to going DAW-free, even if it means just using a simple option like GarageBand like a basic (albeit far cheaper and more convenient) tape machine.

Going DAW-less: 4 approaches

Choosing to ditch the laptop is a big decision, but even once you've committed, there's another choice to make: how? There's no single set laptop alternative for making electronic music. There are a variety of gear options out there that can, to varying degrees, replace the functionality of a DAW. Let's survey a few of the best options, each of which could offer a route into a new, self-contained setup, or be used as part of a mix 'n' match approach

'DAW-IN-A-BOX'

1 The past decade has seen the advent of standalone hardware devices that offer near DAW levels of sound creation, sequencing and effects processing, albeit in a self-contained device that puts more emphasis on hands-on control. The obvious examples are Ableton Push, which offers a fully-equipped version of Live in standalone mode, NI's Maschine+, a fully-featured version of the Maschine software plus some, but not all of Komplete's synth and effect line-up, and Akai's latest-gen MPCs, which combine extensive audio and MIDI sequencing along with an array of Air instruments and effects.

These are as close as you'll get to using a DAW without the need to rely on a mouse and keyboard. Into this category we could also include some of the better-equipped samplers and grooveboxes, such as Roland's MC-707 and MV-1.

Despite any limitations, each can cover most of what we'd expect from a DAW. Each offers sound creation, ranging between stock synths, sampling and beat making tools, with flexible capabilities to sequence both the internal sounds and – to varying degrees – external hardware. In all cases, there are broad effect options onboard and some form of recording, arranging and exporting options, meaning each could effectively create a finished track.

However, in spite of their self-contained nature, a large part of the appeal here lies in the fact that each can work closely with a computer when needed. Push, Maschine+ and the MPCs can all act as controllers for their software counterparts, allowing sounds and projects to be sent back and forth so that musicians can, effectively, have the best of both worlds.

You could argue that these options aren't that dissimilar from using a computer – each has a screen, and a fair few menus to navigate in use. While each has its own limitations, notably none allow the use of third-party plugins. What they do boast are specifically designed, more expressive control interfaces that certainly feel more 'hands-on' than most DAW setups.

PROS:

+ These near DAW-level devices are as close as you can get to the flexibility and depth of a computer without being bound to a screen.

CONS:

– They're not a million miles away from being computers themselves – so perhaps a laptop and controller is an equally good (and cheaper) option.

HARDWARE SEQUENCING

2 If you already have an array of sound-creating devices in your possession – ie synths, samplers or drum machines – the key creative function of a DAW you'll need to replicate is the ability to create, capture and recall ideas such as drum grooves, melodic patterns and song arrangements. A lot of electronic music gear comes equipped with some form of sequencer, and there's a whole lot that can be achieved by simply syncing multiple sequencer-equipped instruments via MIDI or analogue clock.

There are, however, a number of benefits to enlisting a 'hub' device that can sync or sequence multiple instruments. Obvious examples include Arturia's KeyStep Pro and BeatStep Pro, Novation's powerful SL MkIII or Korg's SQ-64. A significant advantage of using multi-track sequencers like these is that they allow you to keep focussed on a single control interface for inputting or playing patterns, muting or soloing

AKAI MPC X SE Akai's MPC range were fore-runners of the trend towards going DAW-less (if not screen-less)

KORG SQ-64 'Hub'-style hardware sequencers won't take you all the way but can offer a great 'sketchpad'

DREADBOX G SYSTEM Modular synthesis offers complete, unfettered creative control

ROLAND SH-4D If performance is your thing, workstations or grooveboxes like these tick a lot of boxes

parts and adjusting modulation, rather than hopping between instruments mid-jam/performance. Another advantage of these more feature-packed sequencers is their ability to store, recall and arrange multiple patterns in order to form arrangements more akin to a fully-formed song.

The other element that needs to be considered when using this approach is some form of mixer in order to combine the audio feeds from your various instruments. There's a wealth of mixer options out there, ranging from cheap and cheerful to high-end options like SSL's excellent BiG SiX. Whatever you go for, it's worth considering some effects capabilities. Most mixers offer some form of EQ and compression. Others add digital multi-effects or a separate send/return, allowing you to incorporate external hardware effects. All of this can go a long way to replacing the functionality of mixer channels and insert effects in a DAW.

PROS:

\+ **Hardware sequencers are a great way to get hands-on creatively and perform tracks, even if you're not a traditionally trained 'player'.**

CONS:

– **You'll need some form of mixer to combine your sound sources. Using multiple instruments can make it tricky to save and recall a performance too.**

EURORACK

3 By its very nature, modular synthesis can be adapted to do a lot of things, making it a handy way to replace the functionality of a DAW in your studio or live setup. Modular synthesis has had a huge resurgence over the past two decades and, while there are multiple modular formats out there, Eurorack offers the simplest approach, since it offers access to a massive array of modules with standardised case and power formats.

> A LOT OF ELECTRONIC GEAR IS EQUIPPED WITH A FORM OF SEQUENCER

In terms of specific modules, it's impossible to narrow the multitude of options out there down to a single recommended setup. Oscillators, filters and effects can handle sound creation and shaping, while combining some of the multitude of creative sequencers on the market makes it easy to build complex patterns and full songs (the likes of Erica Synths' Black Sequencer and Drum Sequencer would be a good place to start).

Where Eurorack really comes into its own is in the range of modulators, clocks and utilities that can be implemented. Between the range of creative LFOs, envelope shapers, CV processors and rhythmic timing devices available, it's possible to form custom rigs that can create incredibly complex, evolving patterns that require very little physical input. When it comes to replicating and – in many ways – outstripping the automation and modulation tools of a DAW, Eurorack could certainly be the way to go.

There are some notable drawbacks to basing your studio or live setup in the modular realm though. The first is cost. While it's a common joke to say that modular users spend thousands of pounds just to create simple bleeps, there's a kernel of truth in the idea that, if you're looking to create full and complex arrangements from a modular system, you're looking at a serious investment before you can match the flexibility of a plugin synth. A second, related, drawback is the lack of polyphony – most synth modules are monophonic, and in order to create chords, pads and multi-layered arrangements, you'll need to add yet more modules to your shopping list.

PROS:

\+ **The modular realm offers unrivalled flexibility. Create whatever setup you want and use a wide variety of sequencers and utilities to vary sounds.**

CONS:

– **Modular gear is expensive, particularly once we get into the realms of polyphonic sounds and multiple track elements.**

WORKSTATIONS AND GROOVEBOXES

4 Workstation keyboards are often seen as slightly unfashionable next to their sexy polysynth counterparts, but if you need a self-contained songwriting or live setup, they offer masses of flexibility from a single instrument.

What we're counting as 'workstations' here would be instruments like Roland's Fantom range, Korg's Nautilus or Yamaha's Montage and MODX+.

All of these instruments combine elements of synth, stage piano and sampled sound content, for a broad sonic range that touches a multitude of bases (much like a DAW's stock library of sounds). More importantly though, they all also feature sequencing, set-list or automation tools that go beyond the capabilities of most synths, resulting in far more flexibility when it comes to creating compositions or planning performances. Akai's more recent MPC Key arguably falls into this category too, although it's pretty much the same as the MPC Live albeit with a nice keyboard attached.

Similar, if functionally a little different, are grooveboxes like Roland's SH-4d, Elektron's Digitakt/Digitone/Syntakt range, Novation's Circuits or Polyend Tracker and Play. These devices all sit somewhere between the straightforward sound creation of a basic synth or drum machine and the multi-faceted functionality of a 'DAW-in-a-box'. Each is polytimbral and all can, to varying extents, create both beats and melodic patterns. These devices, as well as performance samplers like Roland's much-loved SP-404 or Elektron Octatrack, are all considerably less powerful than a full DAW, but still capable of building long form compositions and acting as a hub for further hardware.

PROS:

\+ **Many options listed here are cheaper, or at least more accessible than full 'DAW-in-a-box' tools, and put less emphasis on their screens.**

CONS:

– **You'll likely need to combine multiple devices or add extra gear to create a full performance or studio rig.**

9 quick tips for hardware creativity

Stepping away from a DAW screen can mean significantly shaking up your workflow. Whether you're trying to minimise your DAW's role or ditching it completely, you can maximise your creativity with these tips and ideas…

RESAMPLE!

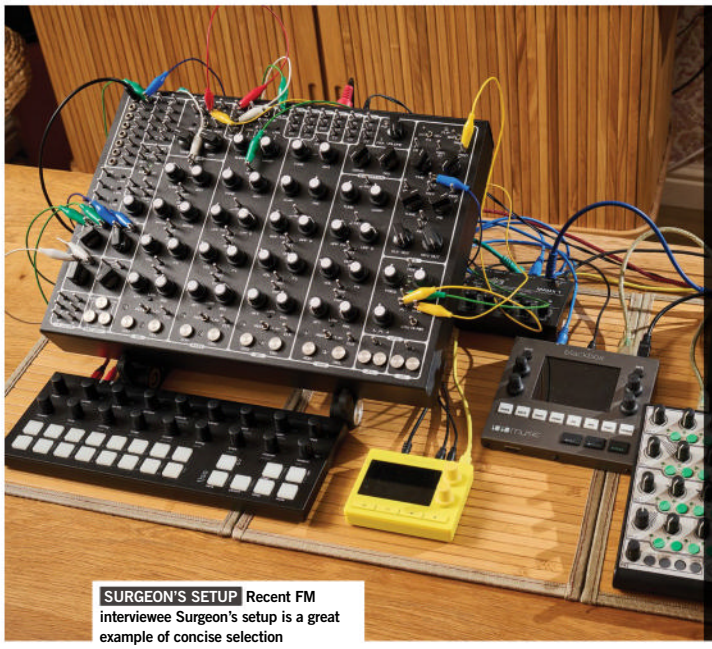
1 If you're using any kind of gear with built-in recording or sampling capabilities, get into the habit of capturing and manipulating your own patterns and creations. For one thing, this can help work around limitations of your gear, bouncing down multiple sounds to a single loop to save on track counts and CPU strain. It also opens up a well of creative possibilities, such as playing back loops at unusual pitches, layering effects or slicing and resequencing sounds.

HARVEST SOUNDS

2 One of the benefits of using a portable DAW-in-a-box or powerful sampler is the ability to capture sounds away from your usual studio environment. Take advantage of this in order to create sample-based instruments from sources you may not normally be able to access. Record 'found sounds' out-and-about. Book a rehearsal room and capture recordings of live musicians. Rent or borrow vintage gear and sample its sounds into your own hardware. These libraries and instruments can then live on your device and provide fuel for your creativity whenever you need them.

EVERYTHING IN ITS RIGHT PLACE

3 Think carefully about what each piece of gear can do in your hardware setup, and avoid combining things with a similar usage. Already got an analogue synth? Try pairing it with something digital like an FM or wavetable instrument. Want something to complement an analogue drum machine? Try a sampling beatmaker.



SURGEON'S SETUP Recent FM interviewee Surgeon's setup is a great example of concise selection

START SMALL

4 If you're building a DAW-less setup for the first time, it can be tempting to overdo it on the gear, adding multiple synth and drum options, outboard effects or a wall of modules. Remember though, you only have so many hands, and while more gear might bring more options, it also means more things that could go wrong or fall out of sync. Start small; not only will limiting yourself to a few choice pieces of gear help keep things manageable, it can also teach you to think creatively as you milk as many ideas as possible out of what's in front of you.

CHANGING PATTERNS

5 All but the most basic hardware sequencers will allow you to program and store more than one pattern. Hopping between pre-made patterns on multiple sequencer tracks, or different hardware devices, is a great way to drive a performance

EMBRACE CHAOS

6 Creating a full sequence or performance means layering sound elements; likely more than you can physically manipulate alone. If everything is simply set and left, things can sound static, even if your patterns are interesting. Modulation and movement – even used subtly – is key to keeping sounds interesting, but it's also worth exploring ways to add randomisation and unpredictability. Many sequencers, including those from Elektron and Arturia, or Push and MPCs, feature probability triggers that can add carefully calculated variation. The modular realm is particularly great for this, with many good random and probability modulators out there. For a more simple approach though, any synth with a sample and hold LFO will allow you to route a little chaos into your patch.

ELEKTRON DIGITAKT Sequencers like this one feature probability options to avoid boring over-repetition

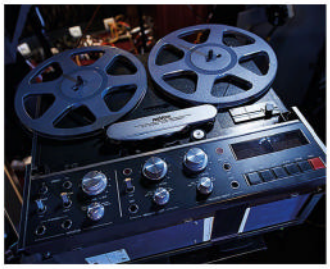
or studio jam. The way in which a sequencer changes from one pattern to the next will likely vary across different hardware devices, and it's worth learning what options your chosen sequencer offers. Some, for example, will allow you to select whether a pattern changes immediately as soon as you select the next one, or whether it waits for the current pattern to finish before moving on to the next. More advanced gear will also allow you to chain patterns together to create longer sequences that don't require manual changes, or create Live-style Follow Actions for setting what happens when the current pattern ends. Knowing about all these options will help you plan longer, more complex arrangements that you might not be able to make with just one pair of hands.

PLAY TO YOUR STRENGTHS

7 The whole point of an 'out of the box' setup is to allow you to get more hands-on with your music. It's worth considering what, precisely, you want to do. No musician has the capacity to play, program, trigger and mix everything at once, so some things need to be handed off to programming, automation or a bandmate. Build your setup around what you do best: if you're a great keys player, make sure you have the capacity to express that; if you're a natural drummer, build a rig around percussion triggers or MPC-style pads. If your skills lie in sound design more than playing, rely on pre-made patterns and sequences and then use filters, effect controls and macros to get expressive.

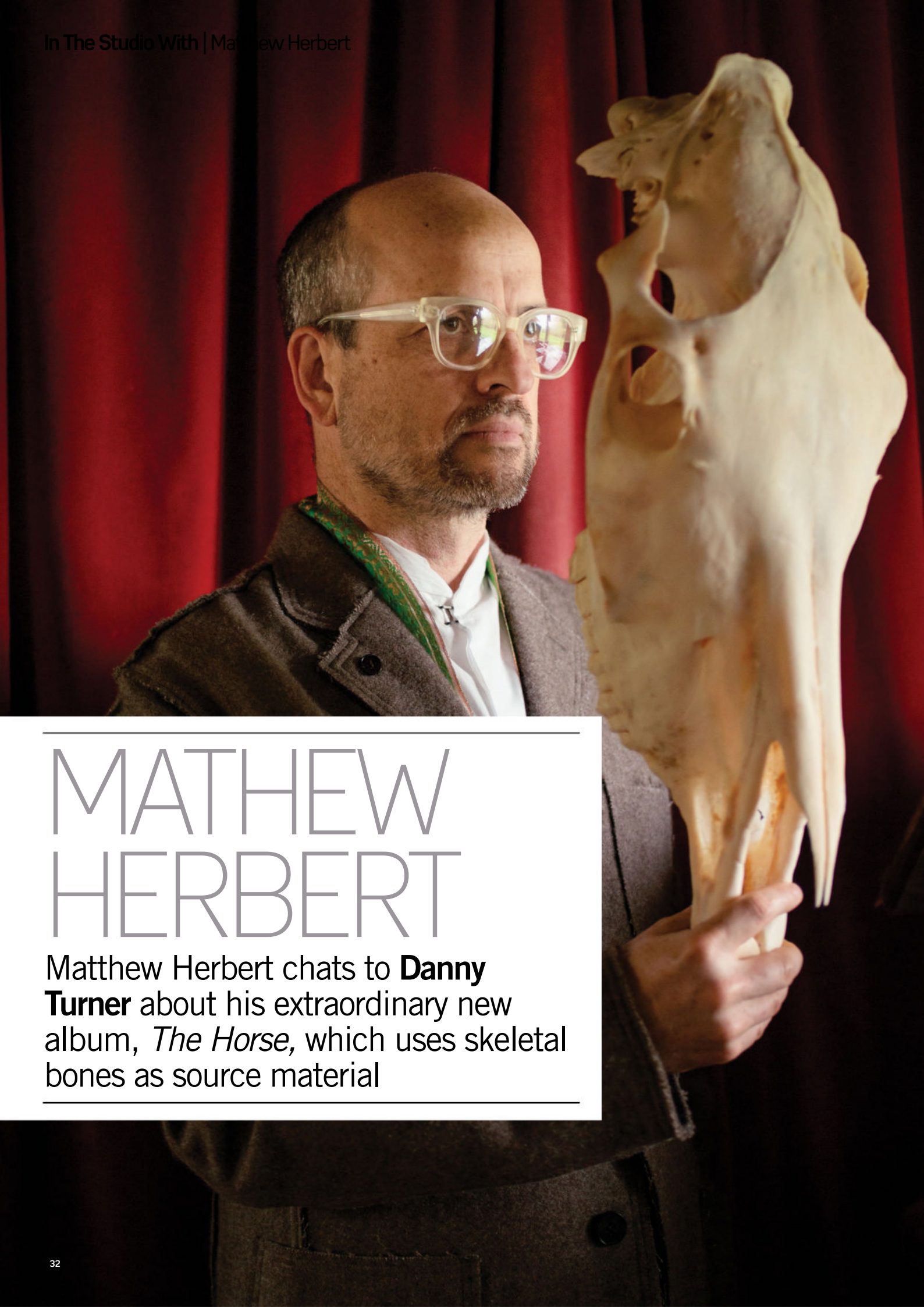
GIVE IT A SQUEEZE

8 If you're combining multiple hardware instruments or varied sampler tracks in a live set or hardware jam, a touch of compression or limiting can go a long way to adding cohesion to the overall sound. A table-top hardware compressor can work wonders for this, or else you could route external gear through a single instrument or mixer that allows you to process its master bus. If compression isn't an option, subtle saturation or distortion is another great tool for creating 'gel'.



COMMIT

9 Part of the appeal of a hardware-focussed setup – and one of its biggest hindrances – is the impermanence of your creations. Yes, most sequencers let you save patterns, and a DAW-in-a-box will store full projects, but even these have a more limited memory than most laptops. When using things like Eurorack patches or analogue synths, often simply powering down and rebooting might completely change a sound, even if you're using identical parameter settings. Embrace the need to get things finished as soon as you're happy, whether that involves exporting a project or using a standard DAW like a tape machine. The first idea is often the best idea, and there can be real benefits to not overworking a project. FM



MATHEW HERBERT

Matthew Herbert chats to **Danny Turner** about his extraordinary new album, *The Horse,* which uses skeletal bones as source material

Long considered one of the most inventive producers of his generation, Matthew Herbert's restless fascination with sampling has created some starkly original releases in recent years. Since starting to score for film in the late '90s, the composer has spent much time creating ingenious rhythms from various body parts, raising complex questions regarding consumerism and our relationship with the animal kingdom.

With his latest album, *The Horse*, Herbert takes another remarkable leap. Expanding an idea that surfaced while writing a horror film score, he decided to purchase a full-size horse skeleton and use various parts as source material for sonic reanimation. Working with instrument makers, the London Contemporary Orchestra and numerous world-leading soloists, *The Horse* is perhaps Herbert's most inexplicable yet compelling experiment to date.

Do you tend to work on projects simultaneously, or does each one require your total attention?

"It's a combination of wanting to and having to, but I quite like working on projects simultaneously. Part of that is due to the horrific economics of making a living in the music industry as an independent artist and the need to subsidise work by doing other work. Film and TV schedules always go over or move forward, but the third aspect is that I really like how projects inform each other. When I started *The Horse* it took me a while to realise that it's about trying to bring a horse back to life through music. Basically, I was talking to a dramaturg called Kirsty Housley and movement director Imogen Knight about how to construct a narrative and imagery around the skeleton of an unknown horse when I got a call from a production company about working on an English horror film about a couple who move back to the countryside when tragedy strikes after a male figure digs up a skeleton of a hare that starts growing muscles and comes back to life. I'd bought some hare bones from Ukraine to make the score and suddenly looked around my studio and found that it was full of skeletons that I was trying to reanimate *[laughs]*."

Did you see this as the celebration of the horse in particular, or could it have been any animal?

"It could have been any animal because when it started I was looking for a diplodocus or a bison on eBay – whatever was the biggest skeleton I could find. The horse ended up being the largest, but I still bought it without really knowing why. I knew I wanted to make a record out of a skeleton, but hadn't begun to think about everything else that the album would become. The more I noticed or thought about horses, they seemed to appear absolutely everywhere. After some research I realised that we wouldn't have had the industrial revolution without them because we relied on horses to dig coal from the ground, haul it to the surface, carry people around and transform our economy. Horse racing is also the second biggest sport after football and subsidised by the government to the tune of £100m per year, so from sport and leisure to industry, the horse is woven through our culture. Ironically, when I was making the record a metal detectorist was interested in finding out what was on our land and dug up a little bronze age offering to the horse gods that's somewhere between 2,000 and 10,000 years old. That's the image on the cover of the album."

The way the album unfolds sounds like a process of reanimation, from the sourcing of the bones to recreating the motion of a racehorse…

"Even 200 years ago, if we wanted to make a piece of music out of a horse we'd have had to imitate the sound of what a horse might make while running or the emotion it might arouse in us, whereas now we can take field recordings or sounds from the internet and use the real sound of a horse. So there is a reincarnation aspect that follows the musical story. It starts with bone flutes that I had made out of the skeleton and the next sound you hear is the skin of a horse stretched over wood to make a horse skin drum. Then you hear a lyre, which is made out of a pelvis before the sound moves into electronics, sound manipulation and sampling. By following my nose and the history of music, I inevitably ended up with this virtual or digital reincarnation of the horse. As mentioned, at first I didn't really know I was doing that and all the musicians I worked with didn't know either – they'd never played bone flutes or a horse pelvis live before. I gave the orchestral musicians ribs and some horse hair to make their own bows to play their instruments with, so, collectively, we were all feeling our way and trying to look for something. It was a bit like going on an archaeological dig or panning for gold."

How did you go about sourcing the physical skeleton and turning that into instruments?

"The skeleton process was relatively painless. I found somebody on eBay who was emigrating and had a large horse skeleton, so he boxed it up and I took a whole collection of bones to the relatively well-known musical instrument maker Henry Dagg in Faversham. He'd made something called the 'sharpsichord', which is a very big pin-barrel organ that Bjork ended up using on her Biophilia tour. Whereas humans have a calf and thigh bone, horses have three articulations in the leg, so he took four of those bigger bones, chopped the ends off and made flutes out of them, stuffing bees wax into the end to create the opening. He did struggle with that, but ended up making what's called a fipple flute, which is a bit more like a recorder. A couple of weeks later I took the pelvis to him and he strung a little banjo to the bottom to create a resonating chamber, put sheep gut strings onto some pegs for tuning and set some contact mics in there. Just stroking the weird texture of the pelvis gives you some extraordinary textures before you've even plucked the thing."

In the past you've used the human body to create samples from, so did you ever consider sampling a live horse?

"I made a record out of a pig that followed it from birth through to it being killed and eaten, which indicates that I'm more interested in creating an afterlife relationship with the natural world around us. It's a complex and fascinating idea and for this project I went to caves in Northern Spain to see some of the oldest horse drawings in the world, made a few surreptitious recordings and worked with Rupert Till from the University of Huddersfield who had permission to provide me with impulse responses. So there I was with the bones in my studio, along with these impulse responses that allowed me to recreate chamber sounds from these Palaeolithic caves. In a way, you're reaching right back through history and embarking on a journey of culture, art and music. That process was such a big leap, that to have a real horse would have been a distraction or diluted the reach across that divide somehow. It's also a fascinating thing to say to a musician that they're the first person to have ever created a melody on a certain type of musical instrument."

There's also the fun aspect of creating instruments and inventing sounds.

"That's really important because we live in a political landscape that's not interested in curiosity or imagination – it's just interested in economics. They're talking about defunding the arts and making it harder for people to study music at university, and there's been a collapse in the presence of music teaching at schools. After years of decimation and creating a miserly, miserable vision of what this country should be, there's a provocation around having fun, exploring and using one's imagination to try and imagine the future or the world differently. That activity can be socially engaging and really joyful and I had so much fun making this record. I went to work with Sam Underwood and Graham Dunning who built the mammoth beetle, which is a giant mechanical drum machine powered by an electrical motor. You can programme it by adding different cogs, but it's all properly analogue. There's no electrical circuitry and you can set up different betas and patterns. I discovered that the vertebrae all make different sounds because they have different lengths and pitches and you can hear that on the record. Later on, I bought a cement mixer to demonstrate the exploitation or mechanisation of the animal kingdom and had a lot of fun putting different things in there like whips, horse stamps and horseshoes to see what they sounded like. You can never underestimate how much you can learn from messing about."

"I TURNED UP WITH A HUGE PILE OF BONES AND SAID, 'OF COURSE WE CAN HIT THEM, BUT WHAT ELSE CAN WE DO THAT'S INTERESTING?'"

© Eva Vermandel

Did you have a clear idea regarding who you wanted to play some of the instruments that you'd created?

"The short answer is that there was a whole range of different approaches. I knew that I wanted Shabaka Hutchings because he'd been playing saxophone less and working with different flutes like the 'shakuhachi'. He's an extraordinary musician, so I was privileged and grateful to work with him. I also love Seb Rochford's creativity with percussion. We went into the studio, turned the lights off and I turned up with a huge pile of bones and said, of course we can hit them, but what else can we do that's interesting? He started scraping them with different materials, which was a real exploration. With both of those musicians, I saved the best bits, chopped them up and reworked those experiments."

Who else did you work with?

"I worked with tuba player Theon Cross. I'd written a basic melody as a starting point, recorded the orchestral part and asked him to go for it, at which point he created one of the most extraordinary recordings. There was something spiritual about the whole idea of bringing this horse back to life and Theon represented that with a real raucousness on *The Horse Has A Voice*. I'd also worked on a film in Panama with pianist Danilo Pérez who is a real hero of mine. Again, I sent him bare bones and asked him to find his own way with the idea that a horse is finally back to life, settled in a field and going about its day eating, drinking and having a run around. It's just an example of the process trying to mirror the narrative content."

In this case, how important was it for you to try to convey your ideas to the listener as accurately as possible, as opposed to leaving them open to interpretation?

"An important point for me is to try and forget or reimagine the idea of a listener. People in Mongolia might be familiar with the sound of horses and horse bones, but that's less likely to apply to someone who grew up in a tower block in Birmingham. Thinking about your audience in that way can be a red herring and get you into problems, but I will use certain techniques depending on how much I want to let the audience in. For example, it was really important that *The Horse* didn't get lost on the internet. Once an album's out, people take the tracks and do what they want with them on TikTok or use them for a film score or DJ set, so it was important to me for every track on the album to feature the word 'horse' and try to describe the journey of the music through the titling. When you're working with sounds you can make them quite explicit or mutate them, but you have to be careful not to disguise them too much otherwise there's no point using them texturally. The straightest track is probably *The Rider (Not the Horse)*, which is a house track. All the percussion is made from rib bones played from other tiny rib bones, but because of the way the production is done you don't think of it in that way. For example,

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"I ENDED UP WITH 7,000 INDIVIDUAL AUDIO FILES, BUT I WANTED THEM ALL ON ONE LOGIC SESSION, SO I ENDED UP WITH 2,000 AUDIO TRACKS"

there are no electronic kick drums on this album; they're all made from horse bits, so that communication with the listener is always a negotiation."

You also worked with the London Contemporary Orchestra. Presumably, you'd already come across them from writing various film scores?

"I've a long history with them having done quite a few film and TV scores over the years with the conductor and arranger Hugh Brunt. Film recording musicians are incredibly skilled but used to playing exactly what's written down, so trying to come up with a new structure or system that allowed them to express themselves and hopefully discover something new was a really interesting process. For the first orchestral session, I booked them for two hours, came with nothing and said you're now going to try and pretend you've never played your instruments before. I gave them the horse hair and ribs and they started to experiment by playing the highest and lowest notes and trying to make single chords, harmonies and textures. In a way, it was like recording a sample library, so I went away and turned all of that into sampled instruments. On the second session, I gave them dots and charts to play along to from weird parts that I'd already slowed down and sped up."

It's hard to figure out these days, but was the orchestra mostly used for tracks like *The Rider (Not the Horse)* and *The Truck That Follows The Horses*?

"There's no fake orchestra on anything. *The Rider* is all orchestral in a fairly conventional way but *The Truck That Follows The Horses* is a combination of me sampling them, bending, speeding and slowing them down and having them play on top of themselves. The whole thing is more like a network than a hierarchy – we all bounced off each other."

You also mined thousands of samples from YouTube. How do you achieve that in a way that's productive?

"A lot of that stuff is automated based on machine learning. I worked with Matthew Yee-King from Goldsmith's University and programmer and sound artist Dan Jones. They're very good at constructing new ways of listening to the internet. I'd ask them to find me something and the computer would scrape the internet and bring stuff back."

Can you describe that process in more depth?

"I once did a piece where I needed to fetch 25,000 dog barks from the internet. You obviously need to sort them out and set thresholds, but it's an interesting area for research and innovation and I wanted to get up to date on that. I also worked on a film score called *Life In A Day* with Kevin Macdonald and Ridley Scott that was made out of 335,000 films uploaded to YouTube on a particular day, so we used the technology to find every sound that was a B natural, which could be a chicken noise, a car horn or someone playing a guitar, and asked it to come back playing the shortest, longest, quietest or loudest sounds. I ended up with a million different audio files, so you need powerful computing and a good naming structure. For *The Horse*, I ended up with 7,000 individual audio files, but I wanted then all on one Logic session, so I ended up with 2,000 audio tracks at 96k. The computer really struggled with that and I ended up with 300-400 busses. For the next record, I'm trying to listen to a billion audio objects in just over an hour. Trying to reimagine the workflow is a fun part of that as you can't possibly get all those files into Logic."

Would you have been able to complete a project like *The Horse* without your history of film scoring?

"The score work has been really helpful on the orchestral side of things. I didn't do music at university and my formal classical music training stopped at Grade A piano and violin aged 17. Doing film and TV scores gave me an opportunity to learn the craft and discover how musicians work and what they're willing to do to get the best out of them rather than treating them like plugins until you get something you like. It's also taught me discipline. I'm still an independent artist and sometimes have to record 25-30 orchestral pieces in one session and go very quickly – that's not much time when you're still trying to find your way."

As a notorious sampler of sound, is your studio fairly basic now in terms of the equipment you're using?

"This is my first ever in-the-box album – it just became too bulky to route all of those tracks and busses through analogue gear, and all the TV and film work has to be in the box because if a producer likes something you did three weeks ago you have to go back and retrieve it exactly as it was. It's difficult, because I'm the son of a BBC sound engineer and don't like the sound of in-the-box stuff. When we mastered *The Horse*, I insisted on having an analogue stage just to get out of the computer and back in, but it breaks my heart that

© Manuel Vazquez

MATTHEW'S GO-TO GEAR

Horse pelvis harp
"Built by esteemed instrument maker Henry Dagg, he strung sheep gut strings over the horse's pelvis to create a kind of lyre – the very first type of string instrument."

Bone flutes
"Also made by Henry Dagg, these are made from some pretty hefty leg bones from the horse, drilled out with a beeswax mouthpiece added to create a flute similar to a recorder."

Horse skin drum
"Made by Driftwood Hollow Drums in Powys, this is a 22-inch handheld horse skin shamanic drum, struck with a felt beater. It has the most amazing resonance and it's hard not to feel like you're summoning something when playing it."

Mammoth Beat Organ
"Vast, modular, all-acoustic mechanical drum machine and instrument built by Sam Underwood and Graham Dunning, who built a bone tombola attachment to churn the smaller bones and horse trophies."

Chandler REDD microphone
"It has so much body and presence for a modern mic. I used it to record many of the details on the record and it's pretty much my only mic now."

Horse having sex
"I'm sure my internet search history raised a few red flags when researching this, but when sped up by four or five times this became my favourite melodic squeak on the record."

I've got a Neve 5088 desk and this album didn't go through it. Things are getting better in terms of plugins getting closer to an analogue sound, but it just doesn't have the three-dimensional character that I'm familiar with and love."

Do any plugins get you closer to that three-dimensional sound you're looking for?

"I like the Bricasti emulation called LiquidSonics' Seventh Heaven. The Bricasti is an incredible reverb box and the plugin doesn't sound quite as good as the hardware, but it's pretty close. I feel really bad sitting right next to the Bricasti box only to pull up a plugin, but then you have the opportunity to use 150 instances of instead of one and recording and bouncing it in. Although I don't like their new pricing model, I like the Waves J37 saturation plugin and think that all the Abbey Road Waves vinyl and tape emulator plugins give a real depth and girth – if we can stop the sniggering at the back. It's nice to be able to add some weight back, particularly when working with found sounds, but then some of the Plugin Alliance stuff has a clarity and cleanliness that's really good for precision."

Is there a distinction between the sound of a sampled object and the emotion of a live musician once that sound is committed to a digital recording?

"There is, albeit not always for the better. A sample feels like it becomes an object that's contained instead of being free and there's something disappointing about that because, despite what the music industry will tell you, music is a process not a product. Any musician will tell you that once they finish an album and tour it, the music changes and they finally understand what the record is. The meaning, context and the players that play on it and where they are in their lives is always in flux and the minute you contain it, it becomes much more like Lego. There's also a tension between an acoustic and recorded sound. One of the things I've loved about making this record is a return to materials. Blowing air through a bit of a horse to make a melody has been utterly thrilling, weird, challenging and beautiful. For me, a key part of the record is that the horse is emblematic or symbolic of our wider relationship to our so-called natural world."

Do you mean in terms of how humans are thought to be destroying the planet?

"We're in an existential crisis where the only thing that we have to do to destroy ourselves is to do nothing, and for me to reconnect with materials from the natural world is part of the thrust of the record. We wouldn't have music without animals, whether that's drum skins or violin and guitar strings, which for many years have been made from the guts of animals. The bows for string instruments are made from horse hair and, obviously, violins and cellos are made from trees that have been chopped down. We're literally using the things around us to make music with and need to find a healthier and less violent relationship with them within music and all of our lives." FM

WANT TO KNOW MORE?

The new Matthew Herbert album *The Horse* is out 26th May on Modern Recordings/BMG. For more information, visit **matthewherbert.bandcamp.com/album/the-horse**

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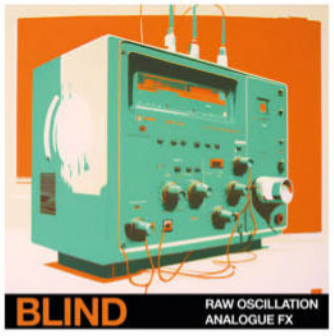

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PRODUCE LIKE...

Nabihah Iqbal

The Ninja Tune artist on how a run of setbacks helped her shake up her workflow for the creation of excellent new album *Dreamer*

© Joseph Hayes

British musician Nabihah Iqbal first made a name for herself under the moniker Throwing Shade, releasing a string of eclectic dancefloor-orientated tracks on labels such as Ninja Tune and Kassem Mosse's Ominira imprint. However, for her 2017 debut, *Weighing Of The Heart*, Iqbal ditched that alias in order to create a more personal record that leaned more towards the influence of '80s post-punk as well as her own Pakistani heritage.

Nabihah Iqbal is a woman of many talents and a prolific work rate. Between albums she has collaborated with renowned photographer Wolfgang Tillsman and Chinese artist Zhang Ding, as well as being commissioned to create music for the Turner prize. She also host a regular radio show on NTS as well as regularly appearing on stations including 6Music, Radio 1 and Asian Network.

As a musician, Iqbal's creative skills cover production, synthesis, guitar playing and her own vocals, all of which have played a role in the creation of her long awaited second LP, *Dreamer*. The album – a second attempt at the follow-up record – sees Iqbal leaning further into her varied influences as well as exploring a widened mix of instrumentation, including sitars and a harmonium purchased on an extended stay in Pakistan. We met up with Iqbal in her London studio to talk about the album's troubled gestation and Iqbal's creative process.

You've faced a few challenges in creating this follow-up to your debut album...

"Yeah, it's been quite a long time between the last album and this one. It feels like there was a lot of obstacles, to be honest, but one of the biggest was definitely the studio burglary. That happened at the beginning of 2020. I lost two years' worth of work in that. I definitely learned the hard way about backing up! That was quite intense."

How much material did you lose?

"Almost an album's worth. I mean, it wasn't finished. But there was a lot of work there. Anyone who's lost any work, whether it's an essay, or music, or photos, or whatever, they know the feeling. At the time everyone was like 'maybe it happened for a reason'. They kept saying that to me. But now looking back on it, because I started again from scratch: yeah, completely. And the music's really different this time around. So maybe it was for the best."

How long did it take you to get back into the swing of work after losing that album?

> "I BOUGHT A GUITAR IN PAKISTAN, JUST AN ACOUSTIC GUITAR FROM A MUSIC SHOP. THAT'S ALL I HAD"

"I didn't get straight back on it. Basically the day after the burglary, I was in my studio with a forensic police officer taking fingerprints, and then my grandma FaceTimed me crying as my granddad, who's my favourite person in the world, had a brain haemorrhage in Pakistan. Suddenly, I wasn't even thinking about the burglary anymore. I just booked a flight and left the next day to go to Pakistan. I was actually supposed to go for two weeks, but it ended up being two months because of lockdown."

You couldn't get back to the UK at that time?

"Everything shut down there as well, so we couldn't get back. It was actually a blessing in disguise for us. Because at that time, I was feeling really ill from burnout from too much touring. Being there in good weather with good food, spending time with my grandparents and just resting made me recover. Obviously, not having any of my music equipment, there was no way that I could have got straight back on it. But then my granddad was just like, 'Look, you have to just carry on. There's no point thinking about it now, it's already happened.'

"I didn't actually know when I was going to come home. I've never had that feeling before being abroad, and just having no idea when I could come back. I bought a guitar out there, just an acoustic guitar from a music shop. That's all I had. I was just messing around making voice note recordings on my phone. Some of those really skeletal ideas have actually been evolved and evolved into tracks that are now on the record. It's kind of crazy. It was a very different approach."

So when did you eventually get back to the UK?

"I was there for two months. I got back at the end of April, beginning of May 2020."

Was that when you made a proper start on the album?

"Well, no – it took a while. I got

back, but I still had to buy another computer and had no gigs or anything. I had to save up to get another computer again. During that, I actually changed my approach because I was thinking, I don't want to feel like this again – I'd lost my work and I can't even really remember all the things I was doing.

"After that, all I did for ages was just use a guitar, or my harmonium and then either recording things on my phone or a loop pedal. I was working on ideas that way for ages and just letting the different ideas evolve and develop, rather than going straight on a computer and building tracks up that way."

Was that how the first album was made, primarily writing on the computer?

"It was more electronic. If you're a producer, that tends to be the default approach – you go in the studio and start recording things into Ableton or Logic or wherever you're using. Then when you come across something good you're like, 'Okay, that's the foundation of this track. And now I'm going to build up.' I kind of think I was forced into that. I actually really like this approach now of saying, I'm not going to record anything into the computer for ages. Even if it's for a year or something."

How different is *Dreamer* from the album you were working on before the burglary?

"It's pretty different. The stuff I lost was a lot more ambient, with more guitar loop stuff. It was more meditative. Some of that feeling has definitely made it onto the new album. But then also, there's like, really fast tracks on it as well. It's more of a mixture between guitars and electronics."

Tell us about the harmonium you used on the album. Was that an instrument you specifically sought out or did you just happen to find one?

"I was specifically looking for one because I'd been thinking for quite a while about getting a harmonium. It's just an interesting instrument. Actually, I was listening to this interview on the radio with Sharon Van Etten and she was talking about how playing on the harmonium really helped her to figure out her voice.

Nabihah's harmonium, a pickup inspired by Sharon Van Etten. "It's the most 'analogue' synth you can get", she says

That made me think of a lot of classical singers in Pakistan who also use the harmonium as an accompaniment. I wouldn't say that I'm 'a singer', if you know what I mean, I just use my voice, but it got me thinking that maybe I should try getting a harmonium and seeing how I can interact with that instrument. That was in 2018, and I finally got one in 2020."

Did you immediately click with it?

"Yeah, I think I clicked with it just because you can create some really nice, droney sounds. It's the most 'analogue' synth you can get, really. The one I've got has this contraption where you can change the airflow and it acts like a filter. It's a really nice vintage one, actually. I got it in old Karachi at this really cool old music shop."

You created the album in a few different studios...

"After all the stuff that I went through in 2020 and 2021, I was finding it quite hard to concentrate in my studio here in central London. There's loads of people around. It's really easy for every day to get filled with other stuff like admin, Zoom meetings, or radio prep, and all these other things. You can't just make a song if you've got a spare hour.

"So I was just feeling quite frustrated by that whole situation. I felt like I needed to be somewhere where I could just immerse myself in the music and not have to think about anything else. I went away to work on a few artist residencies. Twice to a place in Scotland called Cove Park, and then twice to a place in Suffolk, The Red House. Most of the writing was done there."

TELL US ABOUT YOUR...

DJ setup

"I enjoy playing a mixture of both vinyl and digital tracks. So for my setup, I usually have two CDJs, two turntables and a mixer. For nights that I put on myself, I also have a mic because it's nice to interact with the audience a little bit.

"I think the thing that attracts people to my DJ sets is that it's all about mixing things up. There's not one or two specific genres that I stick to, just because I think there's so much good music out there. There are a lot of things that you can move your body to that may not necessarily be what comes into your head when you think of dancing in a club. I like being adventurous and inventive with mixes as well, like often mixing two things together that you wouldn't normally put together. Like, lately, I've been doing this mix of Kylie Minogue's *Can't Get You Out Of My Head* – which is obviously a banger – and then mixing it in with this Arabic traditional dance track with loads of drums. They just work so well.

"It's nice, every once in a while, to play something that's quite familiar to the audience because it gets their attention, but then just throw in something else that they weren't expecting. The main thing is to make people feel good, right? When you're DJing, you want people to feel good, you want them to dance, you want them to just like, have an amazing experience on the dance floor. So as the DJ, that's your job. And that's what I try and do every time."

INCLUDES VIDEO

Nabihah on the harmonium used on *Dreamer*

How *Dreamer*'s tracks where written and recorded

Nabihah's explains here DJ setup in-depth

WANT TO KNOW MORE?

Nabihah's new album *Dreamer* is available now. Visit: **nabihahiqbal.bandcamp.com**

GETTING THE SOUND

What was the process behind writing and recording the tracks on *Dreamer*?

"I work on Ableton. With each track, it works differently. Sometimes I'll come up with the lyrics first and then think about, 'okay, what kind of music will suit this?' Otherwise I'll start by coming up with a drum beat working on a drum machine, or just working with the guitar or a synthesiser or whatever it is.

"It's different every time, but for one example, the opening track on the record starts with a harmonium recording that I made in Pakistan and then put through loads of effects. That track, *In Light*, I came up with by working on a loop pedal. I guess you can hear that in the structure, because it has a lot of different layers of guitar that build up along with a lot of vocal layers. That simplistic approach worked for the opening of the album, creating what I was trying to achieve emotionally. It works as a palate-cleanser, getting you ready for the rest of it.

"Then with other tracks, like *This World Couldn't See Us*, that starts with the most upbeat drumbeat I've made, I think it's like 165bpm. That was actually me trying to recreate a bit that I'd initially made working in Devon Analogue Studio, which I lost when my studio got burgled. It was inspired by the B-52s – they're such an amazing band and their back catalogue has got so many good tracks in it. I remember listening to them and to their drum sounds, which are just so epic and have a good energy to them. I tried to channel some of that.

Inside and outside the Red House, Aldeburgh, former home of Benjamin Britten where some of *Dreamer*'s vocal tracks were recorded

"In terms of gear, there's one really basic drum machine I really love the sound of, which is the Alesis SR-16. Then the Korg Volca Sample features on a lot of the dancier tracks. That's just really easy to use, I really like the isolator on it. When you're in the process of making a beat, it's quite intuitive and tactile. You can really play with the EQ to try and get a feel for what a certain filter might do.

"I also use Guitar Rig a lot for effects, as well as just my normal guitar pedal setup. Then obviously there's the harmonium, guitar, microKORG, Roland Gaia. Those are my go-to instruments."

How did you approach recording your vocals?

"Recording my vocals is always a bit of a rogue procedure. Most of this album I made on different artist residencies in the countryside, where I had a studio space but I didn't have a purpose-built vocal booth or anything like that. I had to improvise a bit.

"The mic I use is an Antelope condenser mic, and I've got an Antelope Discrete interface. So they both work really well together. Those are two bits of gear that I'm really happy to have, because the sound quality is amazing.

"If I tell some stories about recording the vocals on this album, some Puritan studio engineers would not be impressed. But I actually much prefer recording vocals in a space that has a bit of character rather than a really dead vocal booth. Sometimes I was definitely working in spaces that were a bit difficult.

"For example, the vocals on *This World Couldn't See Us*. I recorded them on the last day of my residency in Suffolk. The studio that I was in was mainly for visual artists, and I think it was originally a pottery studio. It had this huge window and slanting high ceiling. It wasn't the best, sound-wise for vocals. I couldn't just record them on the mic, because the sound was getting lost. So I got this huge towel and put it over my head and held it up to then create my own vocal booth, and then stood there and recorded the vocals. It was right in front of the huge window.

"It's at this place called The Red House, which was Benjamin Britten's house that you can visit. It's like a National Trust kind of vibe – a lot of, mainly, old people coming to visit and then they were just all staring at me. They were probably wondering, 'what is she doing?', because they couldn't hear anything. You could just see this girl through the glass holding up this massive towel around her. It must have been quite a funny sight, but I just had to block that out in my mind. Anyway, those vocals made it onto the record and I think they sound OK." **FM**

© Philip Vile

Modulation effects

Warble your way to smooth signals and push things into experimental territory with our guide to phasers, chorus and flangers

Modulation effects are early staples of music production and electric instrument soundcraft. As producers, we almost all know how flange, chorus or phaser effects sound, and we know that the range of sonic possibilities are vast. Take a signal, make a copy and modulate the copy, applying some processes to its fast or slow movement. Modulation effects have been with us for a long time, because their early forms were quite easy to bring about.

It was a relatively simple step for an experimental engineer to duplicate a taped audio signal and to rhythmically slow one copy down and back up again. This would be exactly the same mechanism that first produced flanging, which is so called because the pressure was applied to the 'flange' of one of the reel-to-reel tape machines.

So the story goes, the flanging effect was first dreamt up for the Beatles song *Tomorrow Never Knows* when John Lennon requested producer George Martin to make his voice sound like "the Dalai Lama chanting from a mountaintop". The effect was a sweeping, oscillating curve of sound, and it caught on enough to be replicated by dedicated hardware effects, most notably the Electro-Harmonix Electric Mistress and the MXR Flanger. Thanks to these, you'll hear flanging effects on the likes of classic releases by Pink Floyd, The Police and Van Halen, as well as countless others.

Flanging's modulation sibling is the chorus effect. Slightly different to the flanger in its use of a longer delay between the duplicated pieces of audio, the chorus gets into a realm where our hearing system starts hearing double, making the effect useful for stereo effects or the simulation of ensemble setups.

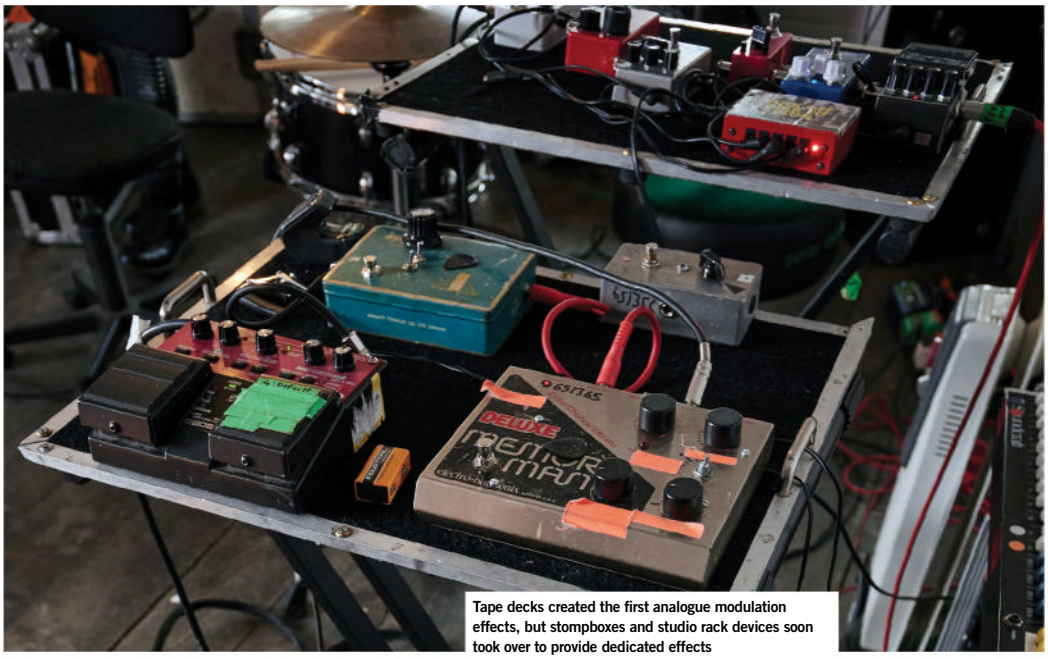
It makes sense – if two violins or human choral singers perform the same melody, they'll inevitably drift in pitch and timing, no matter how skilled. And when you get an entire ensemble together, this natural 'chorus' effect sounds super-sweet. Chorus effects replicate just that, but have been co-opted for uses all their own, with classic examples found in Nirvana's *Come As You Are* or Dire Straits' *Sultans of Swing*.

Phasers are the third key modulation effect in the line-up, with

a very related sound to flanger and chorus effects, although this comes about through different circuits. Phasers found their most welcome homes in psychedelic rock, and often in funk too.

Songs like Jimi Hendrix's *Little Wing* and Chic's *Good Times* (on the bass) typify the classic use of a phaser, but naturally, more modern uses have appeared since. Phasers find a nice home on lead synths, and you'll find more recent examples of this in tracks like Porter Robinson's *Divinity* and Daft Punk's *Starboy*.

That's a potted history of our three main modulation effects, where to hear them and how to understand them. In the rest of this feature, we'll concentrate on some practical uses and how you can put flangers, phasers and chorus effects to work in your DAW.



Tape decks created the first analogue modulation effects, but stompboxes and studio rack devices soon took over to provide dedicated effects

The basics: how flangers, chorus and phasers work

1 A flanger takes the signal, duplicates it, and then 'slows' one copy down and back up again to create its sweeping, undulating effect. The delay between the two copies is usually up to 10 milliseconds, and that delay time is modulated by an LFO.

2 Here's the flanger's effect on white noise on a spectrogram. Resonant peaks are created at comb-filter relationships. These peaks move up and down with the LFO modulation. Character changes with Feedback, number of Voices and so on.

3 At its root, a chorus is similar to a flanger, but the delay time extends to between 20 and 50 milliseconds. The effect is rich, dense, and can give the impression of multiple instruments playing or a detuning, depending on the application.

4 Here's how a chorus looks in the frequency domain. As Feedback goes up, this plugin loses low- and high-frequency information. Importantly, the notches and peaks in the frequency spectrum move faster and more busily.

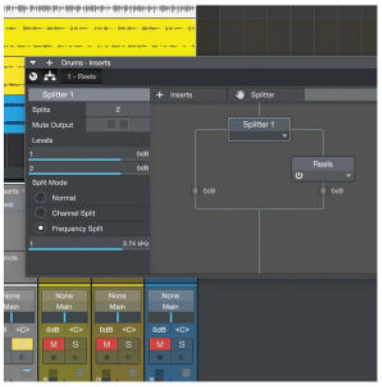
5 A phaser splits the signal into two paths and passes one through a series of all-pass filters, altering the phase without changing frequency. The two paths recombine, and the result is modulated by an LFO, for a swirling, often metallic sound.

6 Here it is on the frequency spectrum. Its notches sweep over a huge range of frequencies, increasing depth with Feedback amount. Like a barber pole, the notches keep moving through the spectrum, seemingly endlessly.

Flanging on the high frequencies of a drum bus

1 Let's roll our own 'authentic' flanger using a tape emulation plugin. With AudioThing Reels, you can set the Mix to split the channels, and set the Echo to about 8ms at Wet Only. You can use the Wow and Flutter control to provide some movement.

2 Flanging on drums can be a cheesy move, but we've kept it classy by using the tape properties instead of using a dedicated flanger. We'll alleviate the 'wetness' of flanging drums so that these two elements go together just fine.



3 We use Studio One's Channel Editor to put a Splitter element before the Reels plugin. We set the split mode to Frequency Split, and set the crossover to about 4kHz. Now, our flanger is only working on the drums' high frequencies.

4 The result is a smoother top-end, with the flanger dulling the hats and rides in a natural way. The top end is thicker and more animated. Try adding other modulation effects to high frequencies on other instruments to smooth them out.

SUBTLER USES FOR MODULATION EFFECTS

Reaching for a phaser, chorus or flanger effect doesn't have to involve an acid trip every single time. There are some more restrained ways to use these plugins that we'll show you here with some high-end drum flanging and some chorus reverb modulation. Chorus effects can thicken and 'double' sounds, so look out for potential subtle uses on any instrument that needs an extra sense of width.

Phasers can be great on lead sounds, giving 'that little extra something' when applied in small amounts. Keep the depth dial down low to give a metallic edge to the upper frequencies of a bassline or to make a lead sound more interesting. For flangers, try a smattering on a vocal track to keep things subconsciously interesting. A singer or speaker moving their head near a microphone – especially during a breath – can produce a natural flanging sound, so you can apply it to add more intimacy and spirit.

Adding chorus to a reverb

1 You may have noticed that reverb effects often have chorus, ensemble or 'modulation' processes included. These are usually placed to smooth out the reverb sound and 'calm' the tail. We can use a whole chorus processor to tailor this effect ourselves.

2 Here in Spectral Plugins' Spacer, we have a choice of reverb and delay modules, and we've got a nice-sounding reverb ready… but we can also turn to the Chorus, placing it just over the reverb's signal to affect just that tone.

3 We can also use other spatial effects, including the Dimension Expander, Haas stereo effect and more, making our reverb wider, more interesting and more characterful.

Deeper parameters in modulation effects

There's usually a bit more to a modulation plugin than just basic controls. Here's how some of the other parameters that you might find work…

'Voices' refers to the number of copies of the original signal that the modulation effect creates. For example, a chorus effect with three voices would create three slightly detuned copies of the original signal. Increasing the number of voices can help create a thicker, richer sound, but it can also make the effect sound more artificial.

Feedback refers to the amount of the effect's output that is fed back into the input, creating a looping effect. In a flanger or phaser effect, increasing the feedback can create a more intense and resonant sound. However, too much feedback can cause the effect to become unstable and produce unwanted noise.

Notches are specific frequencies attenuated or boosted by the modulation effect. In a phaser effect, for example, notches are created by the phase cancellations that occur when two signals combine. By adjusting the notches, you can create different tonal colours and textures. Centre refers to the frequency around which the modulation effect is centred. In a flanger effect, for example, the centre frequency is the frequency at which the effect's delay time is shortest. Adjusting the centre frequency can change the character of the effect, making it brighter or darker.

INCREASING THE NUMBER OF VOICES CAN HELP CREATE A THICKER, RICHER SOUND

Spread refers to the amount of detuning applied to the copies of the original signal created by the modulation effect. A wider spread creates a more pronounced detuning effect, while a narrower spread makes a subtler effect. The spread parameter is often used in chorus effects to create a thick, lush sound. Width refers to the stereo width of the effect. A wider width creates a more immersive sound, while narrower will create a more focused sound. The width parameter is often used in chorus and flanger effects to create a sense of stereo spread.

Exploring advanced modulation parameters

1 Let's dig deeper into modulation parameters. Here in Native Instruments' Choral, we'll start with the Mix control, which controls how much of the effect (vs the dry original signal) is present.

2 LFO settings control movement speed of delayed and copied signal. By increasing Amount, we can increase the LFO modulation depth, and Rate makes it slower or faster. We put the speed so high that it smooths everything out again.

3 The Voices parameter creates the chorus effect multiple times, using different delay times for a thicker effect. With the actual Delay parameter, we change the base time of those knobs. Feedback sends the whole effect through itself again.

4 The phaser has a Notches parameter that commands the number of frequency dips. We also get Spread and Stereo parameters. Spread moves the notches further apart/closer, while stereo creates an offset between left and right channels.

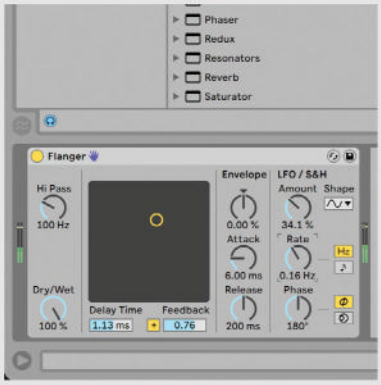
5 Since flanging is centred more around a particular frequency and note, this flanger gives us the ability to literally tune its operation to a particular note and frequency. There's even a scale selector to choose how multiple voices are spread.

6 A digital flanger needs lookahead to act like a tape flanger. As a tape has recorded data on it, you can move it slightly earlier in time than the 'straight' copy. In a DAW, this kind of 'through zero' flanging is possible but needs lookahead activating.

Classic uses of modulation effects

1 A phaser on a guitar is an absolute classic, creating movement across the frequency spectrum that picks out different parts of notes at different times. Try it drier for a less obvious effect that engages for longer.

2 Perhaps even more classic is the phaser on an electric piano. Instant Billy Joel is available using a Rhodes and Small Stone phaser combo. Here, Bitwig's Phaser+ can emulate multiple styles and gives a few controls to tailor the effect.

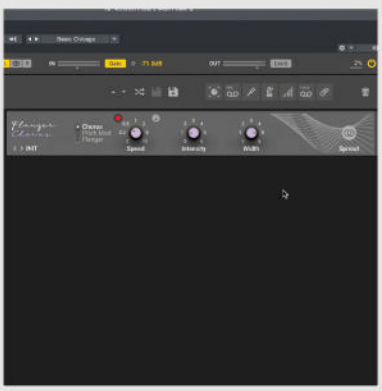


3 Guitars work well with flangers, and were the recipient of the most iconic all-in-one solutions, despite flanging having been invented for vocals. Flanging can be full-on or nice and subtle, and will lend a sense of movement and spread to a guitar part.

4 An electric piano can take a chorus and run with it. We get a somewhat detuned sound reminiscent of Stevie Wonder's tone. Play with the electric piano's EQ on the way into the chorus to get some brighter or duller sounds.

5 Guitars sound great with chorus, but another spin on this is to take a solo guitar and run it through a heavy distortion before hitting the chorus pedal. This gives the signal more stability as the distortion tames the dynamic range, but the chorus wonks it right back up again.

6 Try following a delay with a phaser, especially on a guitar signal. In fact, you may prefer to run the phaser into the delay for a slight twist. Either way, enjoy the swirling repeats that keep things out of this world. Here's the setup running as part of Guitar Rig 6.



7 For vocals, flanging is the obvious choice, but don't go overboard – keeping it light will add a sense of air and space, and can enhance the perceived width of a vocal without absolutely drowning it in 'special fx'.

8 And even on bass, modulation effects like chorus can lend a much deeper feel to the high end. Just make sure to keep the lowest frequencies free from modulation effects, as this kind of movement can reduce a solid bass sound into a quivering mess.

POWER TIP

Orchestral instruments can benefit from modulation effects. Though there's nothing more realistic than real instruments played together, you get some of the way using a chorus or flanger effect with light settings. But for best results, use these plugins as creative effects to twist the sounds of strings and woodwinds into something less recognisable.

THREE OF THE BEST

D16 Group Fazortan 2 £45

1 A comprehensive, analogue-style phaser with two LFOs for sweeping, and Centre and Phase controls. Choose your number of phasing 'stages' to deepen the effect. The use of dual LFOs is one of Fazortan's best features, letting you dial in complex movement.

d16.pl

Brainworx bx_ bluechorus2 £13

2 Want a Boss CE-2 chorus pedal in your DAW? This Brainworx emulation of it is a great option at a very low price. The modelling experts' finely-tuned version of the pedal gives you access to chorus and even rotary effects for guitars, keyboards and more.

brainworx.com

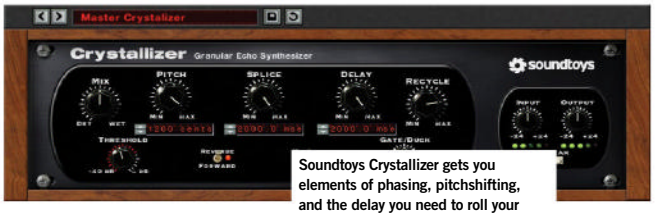
Eventide Instant Flanger MkII £114

3 A classic 1975 flanger device, modelled by the company that actually made it. Eventide have a heritage in modulation and pitchshifting, and Instant Flanger MkII gives you tonal depth with a truly analogue sound. There's also a real bevy of parameters to dial in your ideal flanging effect on any source.

eventide.com

All-in-one plugin solutions

You'll still find phasing, chorusing and flanging available mostly as separate plugins, but there are some options for getting those three effects out of a single one. Waves MetaFlanger, for example, offers flanging into higher rates that cover chorus as well, and the plugin has both phaser and doubler effects to sate your phasing, chorusy desires. You could try Soundtoys Crystallizer for combined phaser, pitch shifting and delay effects – using shorter delay times on a medium Mix level will introduce that flanger or chorus style you're looking for. MeldaProduction's catalogue is also on-hand for effects like these. In MPhaserMB, a multiband phaser is joined by a chorus effect too, and there's multiband control over all. For more combinations of these effects, any amp simulator package – Guitar Rig, AmpliTube or Bias FX – will offer separate 'stompboxes' for modulation as part of a single plugin.



Soundtoys Crystallizer gets you elements of phasing, pitchshifting, and the delay you need to roll your own flanger or chorus plugin

Vocal transformation with modulation effects

1 Today's vocal parts are heavily processed by detuning and other effects. Let's get to grips with how modulation can interact with these to enhance the effect. Here's a track demonstration with some vocals in tow. Let's cook them up in the modern way.

2 We reach for Soundtoys Little AlterBoy, a classic for deep vocal effects and formant shifting. We also take the signal apart using distortion from a Kilohearts Snap-in. It's now bolder, but lacks movement and needs its edges smoothing.

3 Let's use a phaser for that movement. The effect is different depending on where you put it in the signal chain. At the end, the effect can be reduced somewhat, while with the phaser at the start, you can go harder to pitchshift and distort its effect.

4 Here's another version. With a light flanger at the start of the chain, plus a faster chorus effect (with a low Mix value) at the end, we get a more interesting modulation effect. These two effects do similar things, one at a fast level and another slow.

BRIGHT & FINDLAY

Groove Armada's Tom Findlay teams up with James Alexander Bright to create a love letter to '70s rock. **Danny Turner** finds out more

© Simon Griggs

Having been impressed by material aired while presenting the show *Loose Joints* for Soho Radio, Tom Findlay contacted producer James Alexander Bright to ask if he'd like to work on ideas for Groove Armada's ninth album *Edge Of The Horizon* (2020). Although Findlay's writing partner Andy Cato embraced their input, the duo would later team up to rework leftover material for the debut EP *Slow Dance*.

Encouraged by strong support for the title track from national radio, Bright & Findlay then decided to expand their partnership, writing new tracks for the soon-to-be-released album *Everything Is Slow*. Interweaving Bright's lo-fi approach with Findlay's longstanding experience as a producer, the LP is a satisfying mix of '70s rock and Balearic electronics, permeating with light drum machines, chorus-laden synths and soulful vocals.

Tom, what made you excited enough to reach out to James and initiate this collaboration?

Tom Findlay: "As Groove Armada, Andy [Cato] and I were writing *Edge Of The Horizon*, so I was just getting my head back into the idea of writing and collaborating. I was also fronting a show at the time on Soho Radio called *Loose Joints* and listening to a lot of new music. I'd played a few of James's tracks on the show before, but *Tiger's Roar* really spoke to me, so I reached out to James via Twitter and he seemed really enthusiastic for us to work together. We wrote a lot for the *Edge Of The Horizon* record and took bits back to Andy who'd be into some of them but not others – the first single *Slow Dance* was something we'd initially written together but was too funky for Andy, so James and I took the other bits away and decided to work on them together."

James, were you surprised to find Tom reaching out to you?

James Alexander Bright: "It was a bit of a mind fuck at first – I thought someone was trying to prank me! I was using Twitter to look at the latest tunes coming out and saw that Groove Armada had followed me. Then Tom asked if I'd give him a follow back and we got chatting. It was all very exciting. I've been making music for quite a while, albeit at a lot less successful rate than Tom – no stadium sell-out shows for me! But I was in a band called Portico Quartet that had been Mercury Music-nominated and that's where I learned to play guitar, keys and do gigs. Since then I've been in all sorts of folk, funk and hip-hop groups. Most recently, I've been collaborating with producers like Adam Scrimshire of Wah Wah 45s and Albert's Favourites."

Comparing studios, yours seems to be more pick-up-and-play than Tom's?

JB: "Tom's got some beautiful synths, which he uses to great effect, but mine's much more ramshackle. I pick up bits of gear off mates and have always found the lo-fi aesthetic very pleasing to the ear. I've self-pressed and released stuff on cassette, which draws nicely into the releases put out by our label Athens of the North, which has this whole reissue/lost gem vibe. Tom's always had a good ear for stuff, whereas I'm more of a throw-it-at-the-wall-to-see-what-sticks kind of guy and we meet in the middle quite well."

TF: "It sounds weird but I'm at an odd point in my life where I'm coming to the end of my musical career in some ways and really at peace with that. I still make music as a hobby, but work as a therapist for three days a week, which is very involving. In terms of my studio, I'm still stuck in some weird early noughties time loop and have had to decide whether to rip everything up and start again or ease into my retirement with the same kit. Even my desktop computer is a vintage one – I can't upgrade to any software at all."

Is *Edge Of The Horizon* going to be the last Groove Armada LP?

TF: "Andy and I did a live run recently that was really fun. We sold out pretty much everywhere we played in the UK, Australia and New Zealand, but although playing live still feels exciting and fresh it had to come to an end at some point. Towards the end of last summer we did Latitude, but I can't see us performing live or writing albums again because Andy spends most of his time doing regenerative farming. We are putting out some house records for Defected and will be DJing quite a bit this summer and next, but we're definitely winding down the album thing."

"IF BRIGHT & FINDLAY HAS A SOUND, IT'S PROBABLY THE '80S BOOGIE PRODUCTION VIBE THAT WE BOTH LOVE, TWINNED WITH SUNSHINE '70S VOCALS"

You mentioned the release of the Bright & Findlay EP *Slow Dance* back in 2021. Were you testing the water for an album?

TF: "The track was initially written for Groove Armada, but we changed it quite radically, and then James had a couple of other ideas that led to us creating the EP. At that point we were definitely testing the water, but the reception was really surprising. *Slow Dance* got played more on BBC 6 Music than anything Groove Armada released with *Edge Of The Horizon* and that gave us the confidence to continue."

Where did you go from there?

JB: "That first EP gave us a sense of direction, but we were still trying to work out how the music would sound if we were to do more of it. We had an idea about meeting in the middle to create this machine soul, lo-fi boogie kind of vibe. We don't spend a lot of time together in the studio; I prefer working remotely and send stuff back and forth. We both work really quickly that way too, which made things easy once we knew the direction we wanted to go in. Tom is the only person I've ever met who can make 20 versions of one song and be good at it, whether that's folk, hip-hop, funk or a club version. He's got a vast imagination for layout, structure and all the nuances that bring a track to life."

Artists seem to be a lot more comfortable working remotely. No doubt technology is a big facilitator of that?

TF: "On early albums, Andy and I would be sat shoulder to shoulder for 12-18 months and drive each other mad. Eventually, we started working remotely on records like *Soundboy Rock* in 2007. Now we tend to work together in my studio in very short 24-hour bursts and that works really well, but I also love the process of working with James. Getting ideas from him remotely is a bit like unwrapping a Christmas present and he's always very positive, which is different to Andy – he's a bit

more of a Yorkshireman [laughs]. I can see something in every idea that James sends, and with the album being called *Everything Is Slow* you can guess that it's quite intimate. I'll tend to work on stuff late at night with my headphones on and send it to James, which he hopefully loves before we start tightening things up. It brings the best out of both of us."

You've mentioned the album being a love letter to '70s rock. Would I be correct to assume that applies to its organic sound?

TF: "There's that, but James was also talking about the machine soul sound from the '80s that we both love. That's very present on *Slow Dance*, but what makes that interesting is when you combine it with James's vocals on tracks like *Hello In The Dark (Standing)* where he's channelling a bit of The Doobie Brothers or Michael McDonald and does that really beautifully. If Bright & Findlay has a sound, it's probably the '80s boogie production vibe that we both love, twinned with sunshine '70s vocals. That's what's distinct about us."

James, what sort of ideas would you send over to Tom initially?

JB: "On the technology side of things I'll turn to anything from my old Akai MPC1000 to the Koala Sampler on my phone and just record voice notes or spend time using dictaphones recording sounds as textures to turn into synth samples. I'm very much into texture and love sound degradation mixed with Tom's hi-fidelity element, so I'll send him anything from rickety voice notes right through to fairly fleshed out ideas. Some people can't see past how something initially sounds, but Tom has open ears. For example, I demoed by singing into a microphone on my laptop late at night and Tom chopped up bits from those vocals and kept them on the track *Leave It All Behind* from the first EP. That was another one that got rinsed by 6 Music and made it onto the album proper."

TF: "James mentioned throwing stuff at the wall, but he's much more gifted than that. He brings ideas in quite a raw form and I try to squeeze that into how I hear music as a dance producer, which involves tightening things up, using sequenced beats and trying to find a balance between what's he's expressing and making it work in a way that's disciplined and relatable. Some of the stuff that James and I are really united about is the lo-fi approach of hearing hiss on a tape. The more we did that, the more I wanted it."

Was James's lo-fi approach new to you, and did you therefore have to avoid trying to sculpt the perfect sound?

TF: "The track *Flowers* has tons of headphone rattle in the background, which gives it a certain vibe, but James had to help me pull back on over-embellishing certain things because that's a bad habit of mine. I also ended up using quite a lot of different samples for the beats, but by the end of the album I'd used the same kick and snare on everything because I kept coming back to the idea of wanting a unified sound."

The track *When I Look Into The World* is particularly refined. What instrumentation did you use on that one?

JB: "It started as a solo track of mine but didn't fit in with my last record, and I wasn't sure how Tom would react to hearing all the whistling and acoustic guitar parts. I'd also put a crazy

OPTIMOD-FM
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DX100

bassline on it and some badly-recorded drums, but Tom elevated the track massively. He added a strong, firm groove to the bass and some brass and strings. It eventually became one of my favourite tracks on the album."

Can you give us some insight into your lo-fi approach to recording during the demo process?

JB: "I love bands like Unknown Mortal Orchestra who pass everything through cassette decks to get that sound degradation, and I really like how Dâm-Funk has a warm looseness to his sound yet it still sounds great on a big system. I've got a lot of half-broken tape machines, keyboards and old gear that mates have passed on to me or were discovered on eBay or Gumtree, but I also have some nice high-end stuff. I've got an AKG C4 and a bunch of other mics for recording vocals and guitars properly. Sometimes I'll run them straight into Logic using an Apogee converter and other days straight to one of my old 8-track reel-to-reels, but a lot of stuff passes through tape because I've always liked the sound of authentic tape compression."

Tom, you seem to have a ton of hardware outboard. Do you prefer using that to processing in-the-box?

TF: "I use a Universal 1176 for a lot of the compression on vocals and there's a nice mono converter that I always put my bass through called the Dragon. It's valvy and warm and I plug that into a Culture Vulture distressor. I've also got a few effects units from AMS in Burnley. They made an amazing non-linear tape delay that has a beautiful reverb for when you want your snare to sound quite gated and tight. With Bright & Findlay, I've basically reduced myself to using one kick and snare sample, one sound from each of the synths and all the same outboard compressors and reverbs."

JB: "I think that way of working is a good idea because it ties all the sounds together. Unless you're very lucky, production is a process and it takes time to find a sound that you're happy with that represents you as an artist. That sound is what gives you your identity."

TF: "It makes me sound like an old bastard, but when we did the first Groove Armada records like *Northern Star* and *Vertigo*, we had one sampler with 32 seconds of sample time and one live effects unit, which forced you to be a bit more creative and settle on things quicker. With the amount of choice you have now, you can spend hours and hours on stuff and sometimes you need to be forced to compromise. At the same time, I listen to dance records now that are really whizzing and made with a lot of software-based stuff, but I have no idea how they're doing it and wouldn't mind learning a few new tricks on that front. If there's been a weakness of Groove Armada it's that we've rarely settled on a sound, and tracks can sound wildly different across the same record. In my mind, I wanted to do something with James that was cohesive and has a strong sound, and I'm really happy we've achieved that."

> "I LOVE BANDS LIKE UNKNOWN MORTAL ORCHESTRA WHO PASS EVERYTHING THROUGH CASSETTE DECKS TO GET THAT SOUND DEGRADATION"

So despite your great collection of synths, you didn't use too many of them on the record?

TF: "I knew the sort of sounds that James was getting exciting about and was leaning towards the Moog end. I've got an old Oberheim Matrix 6 that has a pad sound that's all across the record, especially on *Hello In The Dark*, but it's a real bugger to programme even after you've warmed it up and blown all the dust off [laughs]."

What exactly is the Orban Optimod-FM Model 8100A?

TF: "I was chatting to Nick Littlemore of Empire of the Sun and he told me it was the best compressor in the world, but you have to get it modified so you can use it. I've had that done now to make it a bit less extreme, but it's still completely mental and incredibly intense!" FM

WANT TO KNOW MORE?

Bright & Findlay's new album *Everything is Slow* is out 9th June on Athens of The North. For more information, visit **brightandfindlay.bandcamp.com**

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Roland SH-4d

Leo Maymind digs into a part-melodic, part-rhythmic desktop synth that defies categorisation

If you like Roland products, over the past few years you'll have been spoilt for choice. You've got the original AIRA line, the Boutique range of the classic synth recreations like the Juno and Jupiter, and you've also got the powerhouse grooveboxes in the MC-101 and MC-707. So it was hard to see any holes in the range, but Roland had something else planned, and that was the new SH-4d.

The SH-4d is a five-part desktop synth: four of those parts are melodic synth engines that use one of 11 oscillator modes, and the fifth part is a rhythm section that has plenty of its own sound-sculpting possibilities within. Each of these parts are coupled to a sequencer and an effect section, as well as a multi-effect that works on the entire SH-4d output. But we're getting ahead of ourselves already. Let's take a look at the specs and see just what the SH-4d is capable of.

At its core, the SH-4d is a fully digital, 60-voice, five-part synthesiser with four melodic tracks and one rhythm track, each tied to a 64-note sequencer. The SH-4d holds eight banks of 16 patterns. Each pattern is stored with its corresponding tones and recalling a pattern recalls all five tracks as well. There are no projects to choose from as such.

The synth engine of the SH-4d uses similar technology to Roland's ZEN-Core line but unfortunately isn't cross-compatible with ZEN-Core presets. Regardless, Roland has really given you plenty to work with in the SH-4d; there are 11 different oscillator modes to choose from. These modes represent a nice cross-section of classic Roland sounds and more future-leaning presets. To scroll through the modes, use the "Model" knob in the oscillator section. The front panel design is very nicely designed so that each section of the architecture is very clearly identifiable and easy to dive into.

First of all, there's the SH-4d mode, a 4-oscillator algorithm that was inspired by Roland SH synths from the past. Similarly, the SH-3D mode uses the SH-4d algorithm with three oscillators but adds a second LFO for more modulation possibilities. The sync oscillator mode features the ability to sync the second oscillator to the first with an adjustable pitch envelope.

The next two modes are modeled after the famed SH-101 and Juno-106 respectively and mirror the oscillator sections of each of these instruments. In SH-101 mode, the four faders become volume controls for the Square, Triangle, Sub

Oscillator and Noise, just like on the original. The Juno-106 mode adds the ability to turn off the square and triangle waves completely, as well as the pulse width modulation on the Juno that we have all come to love.

A Cross FM mode offers a simple, albeit functional, take on 2-operator FM synthesis, with a mod envelope that controls how much modulation is applied as a note is played.

Moving along, the next mode is a Ring Modulation mode, where – guess what! – two oscillators are shaped by a ring modulator. A Wavetable mode has 31 different wavetable shapes to choose from, though not a whole lot can actually be done to them in this oscillator mode; one of the few places where the SH-4d has some room to grow.

Next up is a simple Chord Oscillator mode, which automatically maps a particular chord voicing to each note, although the sound sculpting tools in this mode are limited to a pulse width depth and width control.

Lastly, two of the most interesting modes of the SH-4d are a Drawing Oscillator mode, which lets you draw in a custom waveform using the two knobs below the screen, and a PCM sample playback mode, which lets you combine four PCM samples and control the volume levels of each.

From the oscillator section, the signal continues to a fully featured filter module with both a dedicated high-pass filter (with fixed resonance) and a multi-mode Ladder filter that can be used in low-pass, band-pass or high-pass modes. This second filter also has adjustable resonance, a full ADSR envelope with a dedicated envelope amount knob, and a drive parameter to give it some extra bite. Under the filter, you'll find the amp section with a second full ADSR envelope, a Pan knob, and a Level control. The sole LFO sits under the amp section, with a hefty amount of waveforms available and dedicated knobs to control how much the LFO affects the pitch, filter, and amp settings. There's also a handy fade-in control for the LFO.

The SH-4d also comes absolutely jam packed with effects. Roland really haven't pulled any punches here, as many of their famous effect units are recreated here, albeit in digital form. There are 90 effects to choose from, several of which are really multi-effects disguised as a single device. It's hard to see how anyone can hear these as anything less than stellar in terms of sound quality. There are reverbs, delays, choruses, phasers, overdrives, filters, loopers, amp and overdrive pedal modelers, etc. The effects very much go deep on the SH-4d, and each has its own specific set of editable parameters that can make them potentially very customisable. This is not a "pick a preset and live with it" machine, folks!

Similarly, the rhythm track of the SH-4d might seem like a last minute addition to an already very fully featured synth, but it's actually a complex instrument in its own right. This fifth element, if you will, features 26 individual sounds per kit, each of which can be individually muted and tweaked. Each sound uses two waveforms as starting oscillators, each with an editable pitch envelope for each. You can also configure mute groups within your kits by pressing Shift and Step 6. This dialogue box also allows you to select which instruments in your kit go through the multi-effects and which remain dry, yet another way to get your bespoke kits sounding just the way you'd like.

> IT'S HARD TO SEE HOW ANYONE CAN HEAR THESE AS ANY LESS THAN STELLAR IN SOUND QUALITY

If you want something a little different, Roland has included a few 'add-ons'. First is a feature called D-motion that lets you assign various parameters to the X and Y axes and then physically tilt the SH-4d to modulate said parameters. We don't see this being too useful but perhaps you will.

Lastly, there are a few new 'physical' arpeggio modes that are fun to play with but limited in use by the fact that those modes, which are accessed via Shift + Step 16 and scrolling down to Visual Arpeggio, stop working when changing to another Part. Maybe a future firmware update will address this.

THREE QUICK TIPS

1 Pressing shift and the Arpeggio button goes to the Configure Arpeggio window. In general using the shift button in conjunction with another function button opens up a deeper window for further manipulation. You can also long press buttons like the reverb, chorus, and delay in order to open menus for any of those settings.

2 While the SH-4d doesn't have endless encoders, you can hold the Exit button and turn a knob to see its current value. This is very handy when switching between parts and the knob positions might not line up with where the patch memory positions are.

3 While it might seem like the SH-4d is loaded with preset patterns and sounds, it's very easy to start from an Init patch and pattern. To do so, simply press shift and Step button 10 while on the Pattern page to start with a clean pattern, and repeat the same procedure while on a Tone page to start with an Init tone.

The SH-4d's sequencer, one pattern at a time

There's a lot to love about the sequencer within the already-powerful SH-4d

01 >

The SH-4d's sequencer allows for up to 64 steps for each part, and each can have its own step-length values and playback modes. There are also three ways to record in. The first is the simplest: hold a step and press a note to input that step onto the sequence.

02 >

It's also possible to do real-time recording. To enter that mode, hold down the shift button and press Start. You'll see the corresponding dialogue box open up on the screen to indicate that the SH-4d is recording. Unfortunately there's no metronome to play along to, but it's a fairly quick endeavour to set up a quarter-note pattern with any sound on the rhythm track. To exit recording, press the Exit button. If you don't like what you've recorded, you can press shift and step 12 to undo it.

03 >

If you like the SH-101-style sequencer workflow, you're also in luck, as the SH-4d allows for what's called Step Input recording too. To do this, hold the step that you'd like your pattern to start on – in our case, step 1 – and press the Start button. The same recording dialogue box will appear but now instead of your sequence playing, you'll see the steps automatically advance through the sequence after each note is entered. Again, multiple notes can be entered at once (unlike on the original SH-101).

04

You can tweak the recorded gate and velocity values of each step by holding a step button and pressing < or > to lock the editing screen. The first column shows the notes played on that step, the second the velocity values for each note, and the third gate values. Scroll to the next screen with the > button, and you'll see the Probability value per-note, plus the Sub-step value division options. Each can be played with a flam or with 1/4, 1/3, or 1/2 substeps. A lot is possible once you dig in!

MIXING THINGS UP A BIT

The SH-4d's mixer mode is incredibly useful, as it lets you not only change volume and panning for each part but also reverb, chorus and delay send values for each. Accessing the mixer is slightly more fiddly than you'd expect, as it's two button presses as opposed to one: first press the Pattern button to access the Pattern page and then press Sound to access the mixer page. The four faders default to the volume levels for Parts 1-4, while the Timbre knob controls the volume of the rhythm part. The keyboard buttons also act as individual mute buttons for each drum sound in the rhythm kit, making it very easy to drop out the kick for those classic buildups. Buttons 1-5 also act as mutes for each of the parts if flicking down a fader is too much trouble. You can adjust the send values for each track by navigating to the appropriate level fader with the up and down arrows and then adjust those values with the second knob directly below the screen.

To mute, either flick the SH-4d faders or press the handy mute buttons for a quick option

4 QUICK TIPS FOR MORE 4D FUN

MINDING YOUR PS AND EQS

If you're working on something that involves all five Parts and you'd like to make wide-scale changes, you're in luck, as the SH-4d features a System EQ/Comp that is slightly hidden away within a menu but allows for a lot of sonic manipulation. To access the System EQ and compressor, press Shift and Step Button 16 (labeled Menu below). Scroll down to System EQ/Comp and press Enter. By default, both the EQ and compressor are turned off, so you'll need to switch them on before you begin to hear their effect in action. The EQ is a full five-band design, with high and low shelves and three mid bands with adjustable frequency and Q settings, so there's plenty to work with.

SEQUENCE AND YE SHALL FIND

While the SH-4d isn't advertised as a groovebox per se, the built-in sequencer is still very powerful and flexible, as have been most of the recent groovebox offerings by Roland. Each part has its own sequencer including the rhythm section, and each part's sequence can be its own length, up to 64 steps. There are several choices for playback direction, including forward, reverse, forward and reverse, inverse and random, so creating evolving sequences using only a few of the parts is quite easy. It's also possible to go deeper in each sequence and adjust the gate, probability and velocity values per step to really fine-tune your patterns.

SHORTCUTS TO SUCCESS

Holding down the Page/Tie button holds two hidden shortcuts. Normally, pressing the Page/Tie button moves you to the next grouping of 16 steps in your pattern. This can be seen visually at the top of the screen when you press the Page button, represented as four blocks. However, you can turn knob 1 while the Page/Tie button is held down to adjust the current part's Pattern Step length. Turning knob 2 while holding down the Page button changes the pattern playback mode. Both of these shortcuts can be used to add some nice live variations to your pattern while jamming.

OUTS AND ABOUT

Although there's only a stereo output pair on the SH-4d's rear, it's capable of outputting each of its tracks individually via audio over USB. To do this, you'll need to download Roland's dedicated SH-4d driver, at which point you'll see the SH-4d show up as a 12-input/2-output audio device in your DAW. The main stereo outs are on output 1/2, Part 1 is on output 3/4, Part 2 is on output 5/6 and so on. It's worth noting that the multi effects are only present on the main stereo output, although each part's built-in effects are part of that track's signal path. You can record all 12 tracks at once if you'd like to capture both the wet and dry portions of the signal, which is quite useful if you're keen on using your own plugins for reverb and delay. FM

Recording knob motion

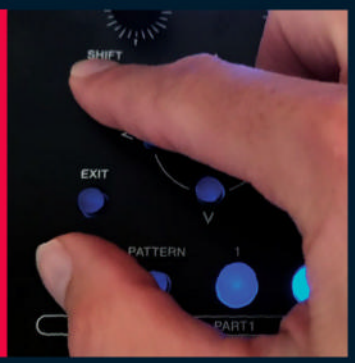
The SH-4d can record automation by capturing knob movements and then playing them back with your pattern. Here's how...

01 >

The first thing to do to ensure your knob movements are recorded is to enable Motion Recording, which by default is turned off! In order to do this, go into the Pattern menu by pressing Shift and Pattern, and scroll down to the Motion Sw setting. Make sure this is set to On.

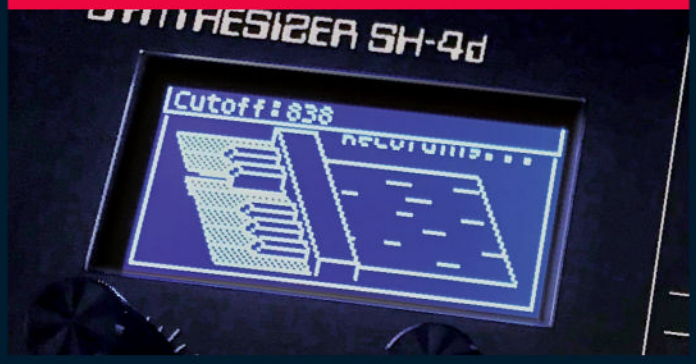
02 >

Starting the knob recording process is like recording notes into the sequencer: press Shift and Start and you'll see the recording dialogue box again. Any knob movements you make in record mode are added to your sequence, with a few exceptions.



03 >

Unfortunately, at this moment in time, there's a limit to four knob values per step. These can be edited from the same window as the gate and velocity values. Hold down a step button and then press the right arrow twice to access this page. Each parameter also has its corresponding MIDI CC value displayed as well, so you can easily direct external MIDI gear to these parameters as well.



04

You can copy the motion parameters saved per step and paste them on another step, speeding up the workflow for creating more intricate patterns. To do so, press Shift and Step 13 (labeled Copy below the step) and use the left knob to scroll so that Step is centre-screen. Now, the top arrow button will copy the selected step, and the bottom arrow key will paste the previous step's contents onto any selected steps. You can also do this with several steps at the same time by selecting Multi-step instead of Step.

BRAIDS

Montreal art-rockers Braids reach a pinnacle with fifth album, *Euphoric Recall*. **Danny Turner** learned more about their back-to-basics approach

© Melissa Gamache

Upon the release of their debut album *Native Speaker* (2011), Braids received critical acclaim for their cerebral yet surreal approach to music-making. Determined to do things their way, the Montreal-based trio evaded collaboration before agreeing to enlist a producer for their fourth album, *Shadow Offering* (2020). However, despite being a positive experience, the pandemic killed off the promotional tour, leaving them crestfallen.

Three years later and the band return with their fifth album, *Euphoric Recall*. Looking to heal their creative spirit and more determined than ever to act on their instincts and self-produce, the LP sees Braids at the height of their creative powers. The meticulous combination of electronics and live strings gives *Euphoric Recall* genuine emotional weight, amidst Raphaelle Standell-Preston's powerfully expressive yet abstract vocal prose.

Braids were very DIY before slowly introducing a producer. How has that journey been?

Raphaelle Standell-Preston: "We produced everything ourselves except for *Shadow Offering* and *Deep In The Iris* where Damian Taylor did the mixing. On the latest record, we've returned to producing again, which is where we're the most comfortable, and our drummer Austin [Tufts] was the primary mix engineer on this one."

Taylor Smith: "When Chris Walla produced *Shadow Offering* we tried to take a step back from our sonic intuitions by capturing a live performance in the room, cutting those experiments up as samples and triggering them for the record, but it's our DIY approach that's really stuck with us over the years. We're very hands-on songwriters and rarely follow the traditional artist structure of writing a bunch of songs and taking them to a studio with a producer who might bring them to life on a record. We like experimenting with shaping sounds in a recorded space right from the get-go and so we brought everything back in house for *Euphoric Recall* and embraced that punk mindset of doing everything ourselves from front to back."

We're coming to a point where albums are made post-pandemic rather than during it, but did that period change how you work together?

TS: "It was very transformative but in a particular way. It didn't dramatically change how we work in terms of bopping in and out of studios and having a wide array of collaborators, because we've always had a bunker mentality. We hole up and isolate ourselves – so much so that until we met Chris Walla we didn't know that other bands made records a different way, but we feel that approach gives us a really unique musical relationship with each other."

RS: "*Shadow Offering* was a painful but transformative experience for us. We threw all our eggs in one basket, worked so hard and had a lot of high hopes for the record, but when it came out during the pandemic and all the tours were cancelled that gave us band depression. We couldn't believe that happened and were really affected. We took some time off from making music because the whole experience left us feeling like we didn't care about the industry or how a record was going to do. Because we'd felt that loss, we came back to doing everything ourselves with a 'fuck it' attitude – it was the only way for us to get that energy back."

Do you feel that Braids has increasingly embraced electronics and allowed that to guide the sound?

TS: "When we started we were all guitar and drums and now we're more into the electronic world, but it's a little bit like a pendulum. The first record was all guitars and effects pedals but we got tired of being referred to as a rock band. But whether the music is acoustic or guitar-driven, there's always been an emphasis on twisting and morphing sounds. It's rare that we'll write a song in a traditional way without throwing a truckload of delay over everything to make it sound otherworldly."

> "IT'S RARE THAT WE'LL WRITE A SONG IN A TRADITIONAL WAY WITHOUT THROWING A TRUCKLOAD OF DELAY OVER EVERYTHING TO MAKE IT SOUND OTHERWORLDLY"

It was interesting to read how when you first started using electronics you struggled to translate that to the live stage.

TS: "When we play a show, Austin is mostly playing drums and Raph is singing and playing guitar, but everything else is on me to get the songs off the ground depending on what we've just released and how the songs are structured. When we first endeavoured to bring the electronic world to the live stage, we really struggled as we'd come from a Moog pedal lineage with no computers or tracking and had a 'no-preset' approach. This was back when indie bands were just starting to play along to a backing track, but we were really snobby about that."

How did you adapt?

TS: "There are aspects of playing pre-recorded parts live that are really cool, like figuring how to create IDM drums or some live looping stuff, but overall it felt like we were too locked in to this machine that we'd designed where we had to hit the right trigger at the right time. The next record was really piano-driven and single chord-based without many arpeggiated sequences, so we decided not to have a click track or a grid, trigger samples individually and build the whole thing that way. That's super fun and flexible because you can take a song to whatever tempo you want and do a bunch of things, but then we went and wrote songs that did have loads of arpeggios so we couldn't do that anymore. I guess that whenever you're bringing electronic music to the stage, you're always designing how interactive you want to be with your instruments and finding that blend is always challenging."

RS: "A huge aspect of every Braids record is the stuff that isn't piano, guitar or vocals and that definitely falls on Taylor's shoulders, which is probably why he's so stressed when we're playing live as a band because he has to redevelop our live show every time."

Was the creation of *Euphoric Recall* conventional in terms of writing demos as a platform to build from?

TS: "This time we wanted to adopt the mindset that once we're in the room together we're there to make a record rather than planning to make demos. We'd done that a little with Chris and while it was often rewarding it was also an arduous process. As Raph mentioned, we really struggled due to everything that happened when it came out so we wanted to adopt a sense of immediacy and create some green light energy. The result was to build the scaffolding of the record as we were writing it. Much of the vocals were first or second take and that applied to a lot of the performances too. Over the years, we've learned how to get a really good drum capture or spend time on the engineering side so we can immediately hone our performance. Everything that hits the page, hits the page, and you can't really undo whatever you've created. It's a bit like painting on a canvas – you can't take the paint off you just have to paint over it. The song *Retriever* was a good example of us creating a live, off-the-floor recording where we owned a certain performance."

Raphaelle, when you wrote the lyrics to Braids' debut album *Native Speaker*, you mentioned feeling that the world was unfair. We can't imagine that's diminished, but is that the fuel that feeds the lyrical fire?

RS: "There is a lot of injustice and uncertainty in the world right now, but I was a teenager when I wrote our first record and now I'm a 33-year-old woman. When I was 18 or 19 I was struggling with

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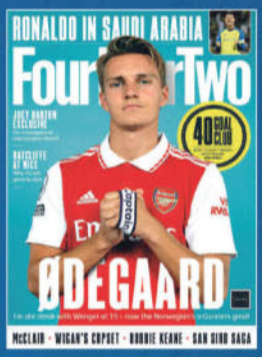

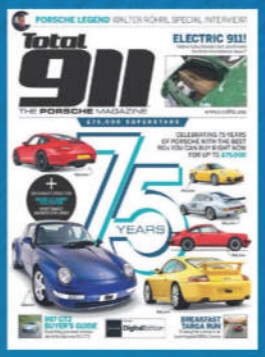

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SORTIE

my mental health, but I've done so much therapy over the years I could probably get a degree [laughs]. What has been a blessing and a curse, but I've now learned to utilise, is that I'm a very sensitive person. I feel a lot and observe a lot, but I've learned to become a positive vessel in a way that's not draining for me. Of course it's good to get angry at times because it's an important human emotion, but so are love, sadness and excitement."

On the opening track *Supernova*, you sing about the dark web, glaciers and the "orange man". Are these reflections of modern-day subconscious anxieties?

RS: "Absolutely, but all of the lyrics were written on the spot while I was singing them. We had a rule in the studio not to have your phone on, but I write my lyrics on the phone because it's easier to read off when I'm next to the microphone. For *Supernova*, I took my phone off Do Not Disturb and read that it was Chris Walla's birthday, which is where the 'happy birthday to you' lyric comes from; my boyfriend at the time floated into my DMs and I was looking at my Twitter feed with some shit about Trump, QAnon and Elon Musk, so I basically vomited up lyrics."

Have you had to learn to override your feelings of self-consciousness when performing?

RS: "I struggled with that for a long time because I'm a very intimate, honest and impulsive person. When I was younger, a huge aspect of what people would focus on in my lyrics was sex and that I was swearing. I definitely took that to heart and felt anger at the time about how I was being defined as a woman in the music industry, but it's a very different climate now."

The music seems very closely related to the lyrics in that it seems to respond to specific lyrics with specific sounds?

RS: "It was really interesting working with Chris Walla on that because he talked to us about supporting the vocal, listening to the storytelling and responding to lyrics with sound and instrumentation. I took that to heart too by listening to sounds and asking how they make me feel as opposed to them being separate entities."

Tell us about some of the sound abstractions that run through the tracks. *Supernova* sets the mood with what sounds like a windscreen wiper?

TS: "It's cool that you think that [laughs], but it's actually a processed drum machine mixed with the sound of hands sliding across the strings of an acoustic guitar. We're proponents of leaving our mics on all the time, and that might mean capturing the sound of people walking up to it or little ad libs that happen between takes and using those for texture and colour. There have been times when we've hit a water bottle in a weird way and pitched it, but lately it's been more performance-driven."

Is the implementation of a lot of those sounds done in post-production?

TS: "As we mentioned before, there's a lot of stuff that hits the page that isn't quite totally upright because we're not putting a premium on perfectly colouring within the lines of whatever performance we want to do. It's about speed, feeling, chasing the idea and then moving on to the next thing. That might mean painting over sounds with a new layer to give ideas stability or processing them in an

interesting way to push them further into the obscure so you end up with these unexpected textures. In that way, an acoustic guitar part that you thought would be straight and centred ends up being totally leftfield because the playing wasn't quite right or the harmony didn't line up when it was initially performed."

A major part of the album is the inclusion of orchestral strings and we understand that composer Edwin De Goeij gave you some assistance on that front?

TS: "Early in the process we highlighted that strings would be an interesting thing for us to explore. It's been in the background on previous records, but this time we composed the parts using Kontakt samples until they sounded how we wanted them to and Edwin came in to help transcribe and notate those parts and create scores that we could give to session players. He also helped us with some of the arrangements, alongside Austin who has some experience of scoring for strings on other records."

"IT WAS A BEAUTIFUL EXPERIENCE – ONE THAT REMINDED US THAT IT WOULD BE NICE TO COLLABORATE MORE WITH PEOPLE ON OUR RECORDS"

The strings give your music a whole new emotional dimension. It must have been gratifying to hear them being performed for the first time?

TS: "It was definitely a sonic trip to stand in a room and hear those pieces come together. We've been doing this for around 12 years now and are very familiar with our tools and each other, so to get into a brand new space was a new dimension for us. It's probably the first time we've ever had someone else playing on a song."

RS: "It was a beautiful experience – one that reminded us that it would be nice to collaborate more with people on our records and feel that interaction."

What hardware synths did you use throughout the recording process?

TS: "Most of the low-end synth bass stuff comes from the Korg MS-20, but the main polysynth I use is the Korg Prologue, alongside some modular outboard for effects processing rather than synth generation. We also used an old '70s synth called a Korg Sigma, which was great for vintage lead lines, and there's quite a bit of piano on the record. Actually, the track *Lucky Star* is all piano recordings sampled, restructured and processed to the point where they sound like an ambient texture or synth loop."

There doesn't seem to be a lot of live drums on the album but quite a bit of programming?

TS: "We used an MFB Tanzbar for a lot of the drum machine sounds and the track Left/Right is quite glitchy and based on Ableton drum samples. Austin triggered a lot of the drums from sample banks he has using the Roland SPD-S sampling pad, so all of those glitches are actually performed, and it was fun and interesting to create Autechre-style drums in a way that moves beyond them being tied to a computer or sequencer."

Taking into account the heavy orchestral component to this record, how do you intend to perform the tracks live?

TS: "For the first few shows, we feel that having the ensemble onstage with some immersive visuals would be a special opportunity to accentuate the work and mark the release of the album. To have other players on stage is a new foray for us, but it's interesting to think about how we might bring material from our past catalogue and add a string element to some of those songs. Hopefully we can reimagine those tracks through a different lens altogether and find a new vessel to take them forward emotionally." FM

WANT TO KNOW MORE?

The new Braids album *Euphoric Recall* is out now via Secret City Records. For more information, visit **braidsmusic.bandcamp.com/album/euphoric-recall**

JFDR

Matt Mullen discovers how Jófríður Ákadóttir has extended her creative vision further than ever before on her third album as JFDR

© Dora Duna

Not yet 30, Jófríður Ákadóttir has been making music for half of her life. At only 14, the Icelandic musician and producer was recording DIY folk duets in GarageBand as part of Pascal Pinon alongside her twin sister. After finding acclaim setting 19th-century Icelandic poems to skewed synth-pop with Samaris, experimental impulses led Ákadóttir to form Gangly, a trio that shrouded her soaring vocals in dark, fractured beats.

A little of each of these projects can be heard in the music Ákadóttir now records as a solo artist under the moniker JFDR. Building skeletal compositions from piano, violin, and guitar she clothes their bony frames in shimmering electronics, their rippling fabric lending colour and texture to songs that recall the glacial and austere landscapes of her homeland.

Though minimal in its arrangement, Ákadóttir's music is suffused with feeling. Many have compared the artist to fellow Icelandic songsmith Björk, who has cited Ákadóttir as an inspiration for her own work. But where Björk's theatrical productions amplify lofty themes to cosmic proportions, Ákadóttir's songs home in on tender, intimate details that illuminate her inner life in soft focus.

"I'M OBSESSED WITH MAKING ARPEGGIATED LOOPS. IT'S KIND OF THE SAME WAY THAT I PLAY GUITAR. I DO A LOT OF FINGERPICKING, AND I'VE NOTICED A PATTERN NOW"

Singer, songwriter, producer and multi-instrumentalist, Ákadóttir's vision extends to every corner of her new album, *Museum*, her third as a solo artist and first for London-based imprint Houndstooth. The beginnings of the new record were laid down at home – a home shared with Ákadóttir's partner and collaborator, sound designer Josh Wilkinson – on Ableton Live, before the pair set off for NYC to record parts at Figure 8 Studios and mix the project in Pro Tools alongside the studio's owner, musician and producer Shahzad Ismaily.

We caught up with Ákadóttir and Wilkinson ahead of the album's release to find out more about the equipment, techniques and creative process behind *Museum*.

Can you tell us about how the writing process began for the new album?

JFDR: "Most of it was made here in this room, just a small room that's detached from our apartment. I use Ableton, and I'm kind of obsessed with making arpeggiated loops. It's kind of the same way that I play guitar. I do a lot of fingerpicking, and I've noticed a pattern now. When I play the piano, I play it in the exact same way as I play the guitar. So I would usually make loops on Ableton, and then I have them running and I sing over it.

"I work pretty fast, and I'm a pretty impatient person. I get an idea and I just stick to it. Then as soon as I'm happy with it, I just close the session, and I walk away and I never open it again. For this album, when I had nine songs and I was sort of happy, I showed it to Josh and said, I think I have an album. Josh is not really a producer for other people, other than this project. Josh is more like a sound designer, which suits me and suits this project really well, because I don't necessarily need a producer because I produce myself. But I need a second pair of ears and I need someone to bounce ideas off, and Josh is really good at creating soundscapes and working with the textures of the songs."

Josh: "Often when you write those first demos, they're just stock Ableton sounds, and it's more about the song than the production or whatever. So the process once the song is there is to just flesh it out and take it to a different place, which we did in two iterations."

JFDR: "I don't know why we did this. We never usually do this, but I think it was because there was an urgency to finish the album. We booked a studio in New York – it was just after America opened its borders – kind of just because we could and I had the nine songs ready. So we booked it and that put a frame around the work period and gave us some time pressure. That was to go in and track basically, so we went in and did a bunch of the rhythmic stuff. A lot of stuff that we did in that first week, we didn't end up using, but it was just to get started. That was at Figure 8 Recording."

Josh: "There's a room of synths at the bottom of Figure 8, that's where we discovered the Black Corporation Deckard's Dream. We would just go around the room and track them all. There was an Oberheim, there was a Syntex, a Juno-60. All of them without MIDI, so we'd have to play every one. The Deckard's Dream was the big sound that we discovered. It just mixed so well with the other elements we were using."

JFDR: "It was really perfect with the acoustic stuff. That's kind of what I do, it's always been a mix of acoustic and organic sounds with synths – even sometimes stuff in the box. I think we ended up using some of the Wavetable synth from Ableton."

Have you always used Ableton?

JFDR: "I've used it since 2015. Before that, I was a bit stuck – it was kind of life changing for me. When I first started, I was like 11 or 12, and we used GarageBand for writing songs and demos and stuff. Then I had an open source DAW called Ardour, which was kind of based on Pro Tools. I used that for a while, and that got me to a certain level. I was a bit stuck and relying on other people, and I had this mental block, thinking that it was too complicated and I couldn't do it. It took a few attempts to get started. But then I just had this project on and I was asked to write some music or something, and I was like, okay, I'll just do everything on Ableton, and I've used it ever since.

"It was kind of life changing to have access to something powerful enough, but also simple enough to get started. I've been teaching a little bit of Ableton to young women, because I feel like it had such a profound impact on me at a time in my life where it could have gone either way. I've been teaching young women how to use Ableton because of this. I haven't done it so much now, but like in the last couple of years before Covid, we were doing a bit. I love Ableton, because it's so easy to get started, but it's actually really deep, you can get really deep into it."

Josh: "Once the recording started, we switched everything to Pro Tools."
JFDR: "We made a decision to switch to Pro Tools at that stage in the process. My previous album was finished in Ableton, it was even mixed in Ableton. For this one we switched instantly to produce, and that meant that I didn't feel very comfortable because I'm so fast in Ableton and I'm so slow on Pro Tools. That meant that Josh had to do everything, which is kind of frustrating, but we just committed to it. There was a point where I wasn't hands-on, and I was just describing what I wanted. But it was fine, it's not that kind of record anyway. The previous record was very detailed: little chops and little edits and very specific sounds that came from being made in Ableton, and this was not. This one was more live."

You've worked in Figure 8 before, right?

JFDR: "We've worked in Figure 8 three times. I've done all my records there, basically, to various degrees of intensity. Working in Figure 8 was our time frame: we had a goal and we had a deadline, and we just had to stick to it."
Josh: "We live together, and we were working in our own apartment. So it was a chance to get out of that space."
JFDR: "Otherwise, we would still be here working on the record: it's just endless. Going there was amazing. It was two sessions: a tracking session, and then, when we were quite happy with what we tracked, we decided to book it again. We booked five days for the mixing. We mixed it all on the analogue desk."
Josh: "The mixing, in my opinion, was as important as the tracking. We got it to a point that we were happy with in Pro Tools; like a first mix. Then we just laid it all out on the desk and messed it up, basically, and ran it through heaps of different outboard. Really weird stuff, like taking whole percussion parts and putting them through a random filter, which is what you hear on *Life Man*. It completely changes the composition of the song. Then we just recorded a two-track out of the desk, and that's the mix that you hear.

"So a lot of it, you'll go back to the sessions, and some elements are just not there because they were made on the desk during the mix. We had nine songs that we made in five days. It was like: get up in the morning, lay the track out, get a few sounds, do three passes, check them, and then that was it. Then you zero the desk and do the second one in the second half of the day."
JFDR: "It was perfect, but it was so stressful. For me, it doesn't really suit me that well. You guys were forcing me to go outside with my headphones to listen. They wouldn't zero the desk until I'd taken my phone and listened to it outside in headphones, which is a totally different perspective. If it passed that test, then it was fine."

Could you tell us about one or two pieces of equipment at Figure 8 that helped to shape the sound of the record?

Josh: "We had three reverbs, but the OTO BAM was a cool one. Then there was the AMS DMX, which is an early pitch-shifter. I had also reached out to this company, Hazelrigg Industries, because they had brought out this channel strip I wanted to try, the VLC-1. They sent over one of those and a compressor, and we used that on the vocals.

"Shahzad had also bought a Grampian 636. It's an old reverb and preamp, and there's a company called Soundgas in the north of England who have made a remake. Shahzad had bought one of those, but it was taking too long to come, so we bought a cheaper version from somewhere else and used that. Basically it's just a really filthy reverb that we would crush things into and make them sound really dirty. We were always joking that if we had no ideas or needed something, we'd just put it in the Grampian.

"Also, we had the Moog Rogue set up as a send on the desk, so we could send things through the filter. It has this sample-and-hold, random LFO on the filter, and Shahzad would make these rhythms with it. That syncopated, offbeat rhythm in *Life Man*, that was with the Moog. We had a lot of these weird percussion elements that were pretty normal in the initial session, but Shahzad threw them through the filter and gave them a secondary rhythm. They took on this really interesting, moving character. Sometimes you can't even tell what they originally were."

He does stuff that you'd think is not supposed to work, but it does. Working with him, you always learn things, and we always have a good time. The fact that we could go to America and book the studio with him, it's a privilege."

The Orchid is a really interesting track. The synth sounds as if there's a vocal texture in the sound. Could you shed any light on how you made that?

JFDR: "Our friend Jeremy Melvin, he makes music as Chrome Sparks, he was just helping me out. I gave him the chord progression and said can you play something, and he made those synths with the Juno. We were struggling with that song, and that was a key that unblocked something for us.

"I think that vocal sample, that's more of a *New Dreams* process, where I edit little bits of vocal and copy and paste them to create melodies and textures using the samples. But I feel like it's also the reverb, the OTO. During mixing, I had the OTO and I would press the freeze button, and it would hold the reverb so there's a really soft reverb tail that's weirdly long and static.

"Also, there were some clarinets that we processed through Josh's modular. It doesn't sound like clarinets anymore, but we used Josh's modular to make this little cloud."

Which modules were you using for that?

Josh: "It's mainly Mutable Instruments Clouds. Another send we had on the desk was a module that I built. It's called the Tetrachords, it's not released yet. It's a pitch generation module, and a cloud. So we could send vocal parts to this send, and I could add a fifth or an octave, different intervals of cloud processing on certain elements live, which was pretty fun. You can tell the cloud where to be in relation to the original input to create these harmonies."

> "SHAHZAD DOES WHAT EVERY PRODUCER SHOULD DO, WHICH IS ELEVATE YOU TO TRY AND TAKE THINGS FURTHER, TO A PLACE THAT'S INTERESTING"

You worked with Shahzad on previous projects. What's he like to work with?

Josh: "Pure chaos."

JFDR: "He's crazy. He's the best. You can't even describe him: he's everywhere and nowhere at the same time. He's both so intense and present, and he'll give you all of himself, but then the next minute, he's disappeared, and you can't reach him for days. He's chaotic, but he's also so sensitive and intuitive about music. He loves the music and we have a great friendship. He owns that studio, Figure 8, so he knows it in and out and he's really good at using the studio to create beautiful things."

Josh: "He does what every producer should do, which is elevate you to try and take things further, to a place that's interesting. He doesn't leave it where it should be left, it's always going further to see what happens."

JFDR: "He doesn't play by the rules. There aren't any rules and there isn't anything right. He would just do things like whack crazy amounts of compression on something, and it almost feels like there's like a chorus effect because it's so compressed, especially with guitars. He uses obscene amounts of reverb, and you're just like, how can you get away with using so much reverb?! But it sounds so good.

There's another moment on _Unfolding_, where the violin has some rhythmic processing applied to it. How did you create that sound?

JFDR: "That's our favourite. That's the A1TriggerGate, it's a free plugin from Alex Hilton. It's basically a gate, and you can use their presets – I use them all the time – but you can also play around with making your own patterns. The best thing is changing the attack, sustain and delay gradually and creating these organic textures."

Josh: "The cool thing about that sound is it's 100% dry, other than the gate. There isn't a single amount of processing on it except that. It has this really woody, close-mic'd sound."

JFDR: "Usually we drown our strings in reverb, but with this one it was fun for us to do it completely opposite." FM

WANT TO KNOW MORE?

JFDR's *Museum* is out now on Houndstooth

© Joel Saget/AFP via Getty Images

PIONEERS

Ryuichi Sakamoto

As the world says goodbye to one of the father figures of electronic music (and beyond), we explore his rich legacy

In March this year, the music world lost one of its most influential figures. Ryuichi Sakamoto passed away from cancer at the age of 71, leaving behind a legacy that marks him out as one of the most innovative composers and producers in contemporary music. Across a career that spanned more than five decades, Sakamoto bridged the divide between the popular and the experimental, inspiring countless artists from all corners of the musical map, from hip-hop to techno to classical.

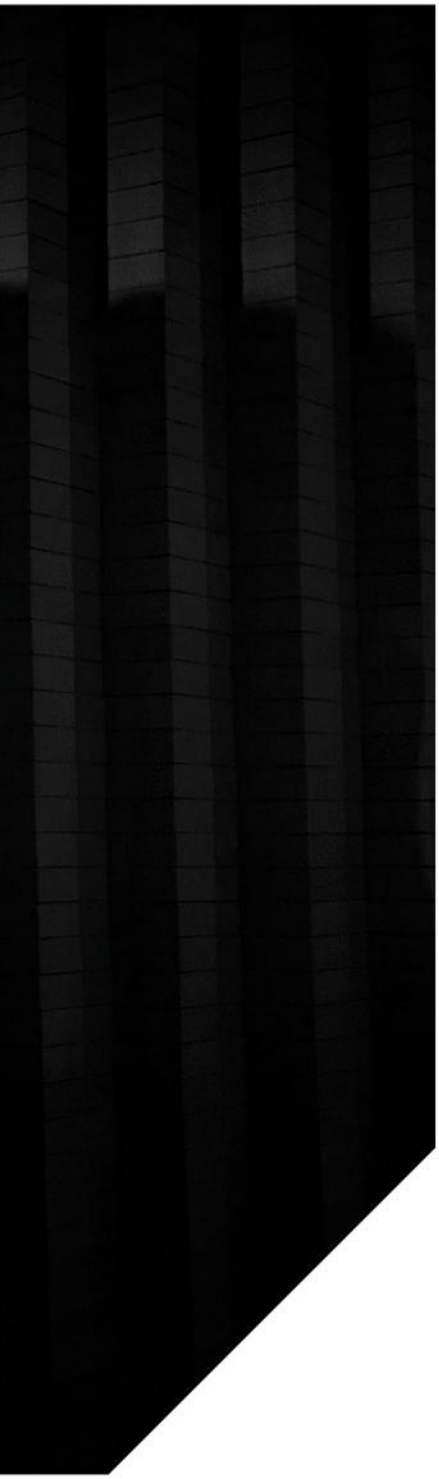
Sakamoto was born in 1952, the very same year that John Cage composed the entirely silent piece 4'33, a serendipitous fact that Sakamoto was often keen to remind interviewers.

Synth magic

His affinity for synths was sparked while studying ethnomusicology in Tokyo, as he tested the boundaries of early instruments from Moog, ARP and Buchla. Not long after finishing his studies, Sakamoto formed Yellow Magic Orchestra alongside Haruomi Hosono and Yukihiro Takahashi.

YMO were a pioneering group: one of the earliest pop acts to incorporate synths, sequencers, samplers, and drum machines into their work, they fused together influences from Japanese, Chinese and Indian music with new sounds coming from the West, like Kraftwerk, Giorgio Moroder and early hip-hop. The group were on the cutting edge of musical technology, often picking up and using state-of-the-art gear as soon as it hit the market.

They were also light years ahead of their time in their approach to sampling, chopping up 1950s exotica and arcade game sounds on their first international hit, *Computer Game*. Alongside Kraftwerk over in Berlin,



YMO played a pivotal role in popularising the sound of electronic instruments around the world and ultimately played a part in ushering in the synth-pop era in the United Kingdom.

Sakamoto's debut solo album *Thousand Knives* arrived in 1978, the same year the group formed, while *B-2 Unit*, perhaps his most well-known solo release, came out two years later. Making liberal use of the recently released Roland TR-808 drum machine, the future-facing record sounded like nothing else at the time, and still sounds fresh and experimental four decades later. Its most influential cut was undoubtedly *Riot in Lagos*, a visionary synth jam that influenced Afrika Bambaataa and Kurtis Mantronik, helping to lay the groundwork for the birth of electro and hip-hop in the United States. Sakamoto continued working on solo material throughout his life, recording over 20 solo studio albums in total, culminating with the understated but powerful *12*, released just two months before his death.

Silver screen success

Though YMO, and Sakamoto's solo work, garnered a devoted and international following, his musical talents would go on to find their widest audience through his work as a composer for film and television. Winning an Oscar, a BAFTA, a Grammy and two Golden Globe Awards over the course of his career, Sakamoto made a name for himself as one of the pre-eminent film composers of his generation, scoring pictures from some of the most respected directors in modern filmmaking. His first film was 1983's *Merry Christmas, Mr. Lawrence*, in which he also starred alongside David Bowie; his final film was Hirokazu Kore-eda's *Monster*, which premieres at the Cannes Film Festival later this month.

Influenced by Impressionist composers like Satie and Debussy, Sakamoto had a unique gift for crafting chords and melodies that slipped a hand inside your chest and grabbed your beating heart. It's exceptionally rare to find an artist who can combine this level of raw talent for pure composition with a mastery of music technology, but this breadth of capability was what was key to Sakamoto's genius: a lover of both acoustic and electronic instruments, he named the Prophet-5, ARP Odyssey and EMS Synthi as his favourite synths in a 2021 interview with *Synth History*.

While we've outlined the highlights here, it's impossible to stuff more than a sliver of Sakamoto's illustrious career into the space of two pages. If you're not acquainted with the work of this visionary and innovative composer, musician and producer, the tracks we've listed here are a great place to start. FM

RYUICHI SAKAMOTO IN FOUR TRACKS

Yellow Magic Orchestra, *Behind The Mask* (1979)

One of YMO's most recognisable tunes, *Behind The Mask* was originally penned by Sakamoto for a Seiko television ad, only to be re-recorded a year later for *Solid State Survivor*, the group's second album. An electro-pop classic, it runs poet Chris Mosdell's dystopian lyrics (sung by Sakamoto) through a vocoder, most likely the Roland VP-330. Such was the track's appeal that both Eric Clapton and Michael Jackson recorded cover versions, the latter almost making it onto *Thriller*.

Ryuichi Sakamoto, *Riot in Lagos* (1980)

Riot in Lagos is a seminal track in electronic music's history: its wonky, mid-tempo groove influenced early hip-hop and electro producers in the US. Featuring prominently on Sakamoto's boldly experimental second album, *B-2 Unit*, the track was loosely inspired by Afrobeat pioneer Fela Kuti's kaleidoscopic polyrhythms. Sakamoto made heavy use of the Sequential Circuits Prophet-10, co-producing the track with legendary dub producer Dennis Bovell.

Ryuichi Sakamoto, *Bibo No Aozora* (1996)

We can't help but shed a little tear every time we hear this one. *Bibo No Aozora* first appeared on Sakamoto's 1995 album *Smoochy* as a dreamy trip-hop number, but the version we love the most can be found on the 1996 version of the album. Distilling the original into a touching arrangement for piano trio, its gorgeous, melancholic, deceptively simple theme does so much with so little. Check out Jay Electronica's equally heartrending *Better In Tune With The Infinite* for an inspired sampling of the track's central motif.

Ryuichi Sakamoto, *andata* (2017)

andata perfectly captures the essence of the style Sakamoto settled upon in his final decade. Taken from the album *async*, his first solo record after battling throat cancer in 2015, *andata* is the sound of Sakamoto grappling with his own mortality: the title means 'gone' in Italian, and he believed at the time of writing that it might be his final release. "That's why I tried to forget all the rules and forms," he told the *New York Times* in 2017. "I thought this could be my last one, so I thought I should do everything that I wanted to do."

FutureMusic Platinum Award

Ableton Push from $999

Ableton's controller goes fully MPE and throws off the shackles of Live itself. **Si Truss** sees how far he can Push it...

KEY FEATURES **I/O:** 2x input jacks, 2x main output jacks, headphones out, ADAT in and out (up-to 10-in/10-out), USB-C, USB, MIDI in and out (via adapter), 2x pedal/CV ports. **PRICING:** Push controller **$999 / €949**, Push standalone **$1999 / €1899**. Upgrade kit (available in late 2023) **$1049 / €999**

THE PROS & CONS

+

MPE pads are responsive, versatile and very easy to use

Workflow is tight and intuitive in either controller or standalone mode

Slick continuity between standalone and desktop

–

Transfer of sample/ Drum Rack presets is a little clunky

Browsing audio loops could be slicker

Only bundling Live Intro feels a little on the cheap side

Ever since version 1 arrived in 2013, Ableton has been calling its Push hardware an 'instrument'. In the past this has always felt rather hyperbolic – Push 1 and 2 were both great in their own way, but beyond Ableton's own marketing department nobody seriously considered either to be anything other than a MIDI interface for Live. The latest version, however, might actually warrant that categorisation.

This third generation – known simply as Push, as Ableton is ditching the numbered naming – boasts numerous design tweaks and new features, but two aspects stand out. The first is an overhauled pad grid, which adds multidimensional polyphonic expression to the controller (aka MPE) for a considerably more versatile and expressive playing experience. The second is the fact that Push is now available in both controller and standalone configurations, with the latter featuring a CPU that can run Live within the Push hardware, entirely independent of a computer.

We'll return to these aspects, but let's get the smaller stuff out of the way first. Design-wise, the hardware isn't a huge departure from that of Push 2. The unit is roughly the same size, if unsurprisingly heavier, and the overall look and layout is familiar. The most significant changes to the hardware can be found on the rear edge, where a substantially increased array of ins and outs take advantage of the newly added audio interface capabilities [see *Plug and Play*].

Control-wise, the most noticeable addition is a sizeable jog wheel to the top right of the interface, which doubles up as a directional switch. This speeds up the process of browsing, triggering and moving between devices, and can be used in conjunction with the directional buttons below it.

Broadly speaking, the Push workflow has changed little from that of version 2, which is a good thing; existing users should settle right in, even though some controls have moved slightly and others have been renamed or replaced. As before, the central grid can be used to trigger clips, step sequence and play instruments using a variety of scale modes, while the buttons and touch-sensitive rotaries that surround the screen let users add, edit and perform with Live's devices and – in controller mode – third party plugins.

The most significant workflow change is that Push can now trigger clips and scenes using the screen and navigational controls as well as with the pad grid. This means that Push can be far more flexible when it comes to both playing an instrument and triggering clips simultaneously, meaning you don't need to sacrifice those new expressive pads when using Push for a performance or jam.

Version 3 also enhances the MIDI editing capabilities when using the hardware, with a new Clip Edit mode that displays notes on the screen in more detail, and allows more precise adjustments using the jog wheel.

As a controller, those pads are Push's headline feature, and they deliver on their promise of expressivity. The 'multidimensional' nature means several additional levels of sensitivity next to Push 2, all of which is registered on a per-note basis. Along with note-on and velocity, the pads grid responds to polyphonic aftertouch as well as movement across the X and Y axis of each individual pad. Ableton recently revamped many of Live's devices to respond to MPE, so there are a lot of stock presets ready to make use of these expressions. In most instrument cases, X-axis movement controls pitch bend for each note, while Y adjusts mod wheel-like parameters such as filter cutoff or noise level.

None of this is exactly unique to Push. MPE has been widely popularised in recent years by gear like Roli's Seaboard range, and we've

THE ALTERNATIVES

Akai MPC Live II
£900

The MPC Live offers a similarly unshackled experience at a much lower price. Push's Live-based workflow is slicker and tighter though

akaipro.com

NI Maschine+
£1,020

The standalone version of Maschine comes equipped with NI's slick beatmaking software as well as several classic – if a little dated – synths including Massive and Monark

native-instruments.com

Novation Launchpad Pro
£300

For a pad-based, Live-ready controller without the bells and whistles of an interface, CPU or MPE, Novation's Launchpad Pro is a great choice

novation.com

seen similar pad-style implementation on instruments such as Polyend Medusa and Roger Linn's Linnstrument. If anything, Ableton is playing catch-up on the MPE front. That said, Push makes MPE control incredibly easy and accessible, and the functionality works brilliantly with Push's already intuitive system of scales. It effectively turns Push into an expressive playing surface with no wrong answers, meaning even the most musically illiterate producer can create expressive musical passages without hitting too many bum notes (my 6-year-old son is enthralled by it).

If that makes Push sound a little toy-like, fear not; there are plenty of customisation options allowing users to adjust the responsive behaviour of the pads as well as route MPE messages to different parameters. For those willing to invest the time to get to know it, you really can play Push like a genuine instrument.

Possibly more interesting than the synth presets are the MPE-ready drum possibilities, which could use the extra directions of expression to be both more realistic – in the cases of acoustic kits – and creative, using the X and Y axis to change things like pitch, filtering and effects. Again, since Push has access to Live's full feature set, users can create and customise their own MPE-format kits and use expressions as they see fit.

Going solo

Undoubtedly the biggest talking point for this new Push, however, is its standalone mode. Push now comes in two configurations: a controller version, which includes the interface and full range of ins and outs but requires connection to a computer with Live installed to operate, and a standalone version, which adds an onboard CPU and battery, so it can run Live within the hardware without needing either a computer or power source. In this mode, Push runs Live on a custom Linux OS. The unit, as shipped, uses an Intel i3 processor with 8GB RAM and a 256GB hard drive. Interestingly, Ableton has made Push upgradable, meaning that these specs could potentially be changed in the future by replacing various elements – which should future-proof Push in the long term. Ableton are also releasing official upgrade kits later in 2023, which will allow users to convert a tethered controller version of Push into a standalone one.

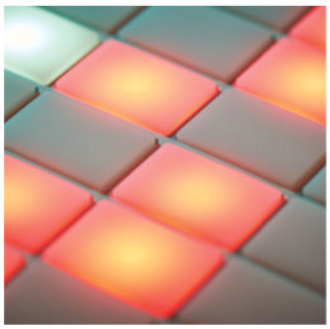
Battery life is around two hours. Not much to write home about, but enough for some fun on-the-go creativity. The real bonus is for live performance, as it means Push won't cut out if your power lead is accidentally disconnected mid-set.

Used standalone, Push really does offer the full Ableton Live experience away from a computer. Every native device – including all instruments,

PLUG AND PLAY

Both variations of Push come equipped with a fresh array of I/O to make use of the new interface. There are two pre-amp equipped jack inputs, two main outputs, and two more assignable monitor/headphone outs. In a nice touch though, Push also includes ADAT in and out ports, allowing expansion up-to 10 ins and 12 outs (meaning you could theoretically track a small band session with Push standalone). There are MIDI in and out ports, although both are mini-jack ports and – in line with a disappointing trend among manufacturers – adapters aren't included. There are two USB ports, one USB-C for tethered use and an additional USB for connecting a MIDI controller. Finally, the pedal inputs from Push 2 remain here, but they also double up as stereo CV outputs, allowing Push to output up to four CV signals with the use of a stereo splitter.

> Undoubtedly the biggest talking point for Push is its standalone mode



audio and MIDI effects – can be used within Push, the only restriction being that there's no capability to use third-party plugins. You can add Max for Live devices too, although compatibility varies depending on whether they have been formatted with Push in mind. The vast majority of Live's features and tools are available too, including audio recording, sampling, warping, editing and audio-to-MIDI. Effectively, if you can do it with the Push controller, it can be done standalone too.

The one significant area of Live that can't be accessed in this mode is the timeline-based Arrangement view. Some might see this as an omission, but I'd argue that by keeping the focus on the clip/scene-based Session view, Ableton manages to keep Push's workflow from getting too convoluted.

Ableton puts no hard limits on how many tracks can be added in standalone. We managed to run around 40 instances of Wavetable before maxing out the CPU, and in a separate set we ran a similar number of Drift devices. We managed to add 35 tracks of audio loops, each with a Hybrid Reverb. It should be said, however, that Push became sluggish to use well before hitting that limit. For comparison, those track counts are a little over half of what I can run using my M1 MacBook Pro.

The real bonus lies in what Ableton calls 'continuity', which is how easy it is to transfer projects between standalone and desktop. Push comes with Wi-Fi, which is used to authorise the standalone version and allows users to download Packs from their Ableton account. When connected to the same network as a computer, Push will appear in Live's browser on desktop, allowing users to seamlessly transfer Sets, samples and presets bi-directionally. Obviously, the lack of third-party plugins on the hardware causes some compatibility issues, but by freezing any tracks using these devices and using 'Collect all and save', Push will import any frozen tracks as audio clips.

There's one area where this seamless transfer breaks down, which is with Drum Racks and sample-based presets. If you create a user preset using your own samples, Live doesn't bundle these with the preset, so transferring it to Push will leave you with a Simpler or Rack full of missing samples to reassign. There are workarounds, but a 'collect and save' option for user presets would be useful. Also, weirdly, as of now, Push's browser doesn't work as smoothly for audio loops as it does for Devices, and unless you set up a system of Favourites, you'll be searching through a long, unfiltered list even if your audio is arranged into named folders. I've put both of these issues to Ableton, and am told both are in the process of being addressed.

A slight gripe is that Ableton is only bundling Live Intro with both configurations. Live Intro limits users to a maximum of 16 audio, 16 MIDI and two Return tracks. While this is plenty to be getting on with, it does feel a bit cheap to impose these kinds of artificial restrictions when someone has shelled out nearly £2k for a unit.

Also worth noting is that the non-processor version of Push is significantly more expensive than Push 2. Given the enhanced pads and inclusion of an interface, that doesn't seem unreasonable, but it does leave a gap in the market. After all, it's safe to assume current Push 2 owners already own an interface and might begrudge paying for another. Perhaps Ableton is opening the door to a 'Push Mini' down the line?

All this aside, this new Push is a bit of a revelation. It's undoubtedly the slickest, most refined 'DAW-in-a-box' on the market, and whether used standalone or not, the expressive pads make the 'instrument' claims feel like more than just marketing speak.

Is it worth spending the extra for the standalone configuration? That depends on each producer's workflow. Right now I'd suggest live performers will get the most out of it. Even in controller mode, Push is excellent, and it's perfectly possible to simply put the tethered laptop to one side and have the same experience for a much cheaper cost. The forthcoming upgrade kits are a smart move on Ableton's part though, meaning that users hooked on the design have an easy upgrade route. FM

PADS: The newly MPE-equipped pads create an expressive playing surface with no wrong answers

SCREEN: Clips and scenes can now be launched using the screen as well as the pads, for extra flexibility

I/O: The hardware offers two ins and two outs, but this can be expanded using ADAT

JOG WHEEL: In control terms, the jog is the most notable addition, significantly speeding up browsing

FM VERDICT

9.8

Push finally lives up to Ableton's vision of controller-as-instrument, and standalone mode is a great new way to use Live

FutureMusic Platinum Award

Akai MPC X SE £2,050

Akai's flagship MPC gets a refresh, but it's about more than just the retro grey paint job, says **Martin Delaney**

KEY FEATURES Classic Akai grey finish, Expanded RAM and onboard storage, Pre-installed MPC instruments, New Vocal Suite effects, Latest MPC OS, 10" multi-touch display, Massive amount of physical controls, Impressive connectivity, Bay for user-installed hard drive, Class-compliant audio interface in controller mode

THE PROS & CONS

+

Works in any musical environment, from beatmaking to soundtracks to live performance

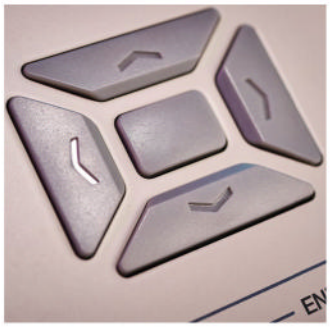
Full suite of MPC plugin instruments, and audio effects including the Vocal Suite

Every type of control is available on this, from pads and buttons, to that big multi-touch display

–

As the flagship of the MPC range, it comes at a price

Bulky in size



Overall a great ad for the one-button-per-function design concept

Akai's imposing MPC X has been at the top of its MPC range since its release in 2017. Now, as Akai mark 35 years since the release of its original MPC 60 sampler, the MPC X SE is launched, sporting a new-but-familiar retro grey finish, and enough under the hood refinements to justify another look.

The retro styling is familiar to Akai fans as a nod to its original hardware, and it's previously been evoked in retro editions of Akai's MPC Live and MPC One. We think it looks great, partly for reasons of nostalgia, partly because sometimes we tire of having nothing but black boxes around us.

But there's more to this Special Edition: the original 2GB of RAM has been doubled to 4GB, there's now 48GB of internal storage, with 16GB being available for user content. Also included free is the entire MPC software instrument plugin bundle as seen on the MPC Key 61; the collection includes the Fabric Collection of instruments, the OPx4, Hype, Tube, and Bassline synthesisers, DrumSynth, Studio Strings, and various pianos.

The box includes the MPC X SE, power supply, ethernet cable, screen cloth, software download instructions, and a neat rigid display cover. The top panel bears 16 velocity/pressure sensitive pads with eight banks; 16 touch-sensitive 360° Q-Link knobs with individual OLED displays, seven 270° knobs, a large encoder, and 63 dedicated function buttons. On top of all that, there is of course the 10" multitouch display.

At the front panel you'll find an SD card slot, two foot switch inputs, two 1/4" instrument inputs, volume control, 1/8" and 1/4" headphone jacks, and volume control knob. There's more at the rear, with two XLR/jack inputs, two line inputs, two phono inputs, turntable ground connector, two main outputs and six extra outputs, all on 1/4, four MIDI DIN outputs, two MIDI DIN inputs, eight CV ports (particularly useful for running modular rigs), and three USB ports. Underneath is a bay for installing a hard drive.

The display features a kickstand arrangement so it can rest at different angles. On startup it presents a selection of genre-based demo projects to get you started. Physically the MPC X SE is a delight to use, a tactile playground with chunky controls, excellent pads (c'mon it's an MPC), clear metering, and overall a great advert for one-button-per-function design.

Anybody who's used a recent-era MPC, or read our reviews of them, already has a fair idea of what the MPC OS is capable of: sampling, looping, recording, sequencing, and

THE ALTERNATIVES

Akai Force £1,059
Also from Akai, the Force enjoys a lot of crossover with the MPC series, but does away with the traditional MPC pads and brings more of a 'Launch' philosophy
akaipro.com

Elektron Octatrack Mk II £1,399
This eight-track sampler features looping, effects, arranging, and performance tools, with a more button-based workflow
elektron.se

Ableton Push From $999
Push is Ableton's own break-out controller for the Live software. As of the new third version, it can now come in standalone form, offering a real rival to the MPC setup
ableton.com

more. It's also important to note that the MPCs integrate with the MPC Studio 2.0 software for macOS and Windows, either sharing projects or acting as hardware controllers. They'll use Ableton Link wirelessly or via ethernet, to sync with other software, and can apply a limited amount of control to Ableton Live. Furthermore the MPC Studio software can run as an AU/AAX/VST plugin within Live or other DAWs. As well as the demos, sample-based Expansions are pre-installed, such as Essential Instruments 2.0, Essential 808, Essential Synth Bass, and more, with further Expansions available.

The smaller MPCs give the option of buying extra instrument plugins, but all are included with the X and Key 61. Instruments can be played from the pads, but we preferred to connect a USB MIDI keyboard and play from there instead. The piano-based plugins are great, inside both Fabric and the separate Stage Piano. Very responsive, great ambient spaces, sounding good on monitors and headphones, and ready to use immediately live or in the studio. There's a Mellotron, organ, electric piano, and other keyboard instruments, although our favourites were Studio Strings – an orchestral set including solo, quartet, and full ensemble takes on double bass, cello, violas, and violins, which just sound great, and on the flip side of things, the OPx-4 synth, which is a blatantly digital-sounding, FM-type synthesiser. The display provides colourful depictions of these instruments and their controls. We were pleasantly diverted from our review tasks to enjoy playing some beautiful soundscapes, while adjusting parameters courtesy of the Q-link knobs. Having these instruments on board confirms the X's self-contained status. There are AU/VST/AAX versions of these plugins included with the MPC Key 61 and MPC X SE, and available for other MPC users.

As well as the instruments, there's a full collection of audio effects from Akai and AIR Music Technology, including the new AIR Vocal Suite, which adds the Vocal Tuner pitch correction plugin, capable of subtle real-time adjustments, or heavy effects for pop genres, Vocal Doubler for thickening and polishing voice tracks, and Vocal Harmonizer, which adds up to four harmonies to your original voice part.

Without doubt, the MPC X SE will tempt the Akai die-hard. However, anybody could take this on stage and run the whole show, with MIDI keyboard, CV gear, instruments and mic going through. It may be seen by some as 'only' a beat-making machine but the connectivity and instruments tell a different story. FM

GREY MATTER: Evokes those early days, as Akai celebrate 35 years since the original MPC was released. The regular MPC X comes in black

POWER HOUSE: Expanded RAM and storage. Houses a quad-core processor, 4GB of RAM, and 48GB of onboard storage

PLUGIN RETRO: Pre-installed suite of MPC software instruments. Over 25 plugin instruments, with a range of sounds

ALL QUEUED UP: 16 OLED multifunction knobs. These 360° Q-Link knobs will update to show parameters for currently selected parameter

ABLETON LIVE CONTROL

The MPC X SE functionality can be used to control Ableton Live. It doesn't provide that full deep integration you'd get with Ableton's own Push, but it can definitely be useful if you're running a setup that uses the MPC alongside Live, and it's very convenient to switch between the two functions in real-time. The MPC X SE display can show Live's Session View, where you can launch clips by tapping on the display, or Live's mixer, or a device control view where you can control the currently selected Live device, with a generic Akai control display (you don't see the Live instrument interface).

FM VERDICT

9.0

This is a fine update to the original MPC X – the new instruments and effects are really excellent

ALM Busy Circuits Pam's Pro Workout £269

Will the pro version of this popular multi-tasking module make **Rob Redman** break a sweat?

KEY FEATURES Multiple CV ins and trigger outs, Flex operations, Cross modulation

Eurorack modules often appear split into two camps. There are those who are focused on one task only and make no attempt at anything other than excelling in that task. Then there are those which seem to cram as much as possible into a single device. This can fall down as complex user experiences, with menu diving and shift-clicking destroying the musical process. That said, some manage to come out shining and ALM's Pam modules reside at the pinnacle of this, finding its way into many rigs.

Essentially Pam is a trigger output module but feels like far more, as the options on offer are substantial and varied. One of the strengths of Pam's Pro Workout module is its versatility. The module can be used in a variety of ways to create complex and dynamic soundscapes. The adjustable timing and division options for the clock outputs make it easy to create complex rhythms and patterns, while the modulation and trigger outputs give a variety of options for controlling other modules in the setup.

Existing users will feel at home, although the benefits of the update are clear, with the larger, full colour display taking centre stage. This display can operate using different themes, so tailoring to taste is easy.

ALM have made a number of additions to the established tools on offer but there are a couple of standout additions which make the outlay for a new version justified.

First up is cross-operation modulation, which allows one output to be modulated by either CG input or another output, using one of a variety of algorithms to control modulation. These can be sample and hold, or Boolean-style operations like mix, add, subtract and a number of others. This capability is an exciting addition and hours can be lost exploring.

Second up is Flex. If you're familiar with timing tools in a DAW this makes perfect sense, as it allows you to add modulation to the timing of your triggers. This can be used to straight quantise output or humanise triggers for a more natural 'playing' of voices. It can add accelerating ratchet effects, or save user-timing modulations. It's a very musical system and one that can add subtle (or not so subtle) interest to a patch.

Clearly ALM has put a lot of thought into this new version of Pam and it's paid off in spades. Each update or new tool is worthy in its own right but the complete package is very compelling. Some users will prefer a function-per-module approach but for most users, a themed but varied set of tools in one user-friendly device will be tempting. For those running smaller rigs, the 8hp module will be the perfect clocked modulation source. **FM**

FM VERDICT

9.0

For previous fans of this useful module, Pro is a worthy upgrade and for newcomers to Pam, what took you so long?

THE PROS & CONS

+

Huge variety of uses

Excellent build and interface

Good options for expansion

Size and form factor

–

Some users may prefer a module-per-function approach

Adam Audio A8H

£1,360 each

If you like slightly bigger monitors, a 3-way design may be for you. **Jon Musgrave** checks out Adam Audio's latest offering

KEY FEATURES **ONBOARD DSP:** AD converter 24-bit, 96kHz, Horizontal/vertical positioning **FREQ. RESPONSE:** 34Hz–42kHz (-3dB) **MAX. PEAK SPL PER SPEAKER AT 1M:** 105dB SPL **CROSSOVERS:** 400Hz, 3kHz **WOOFER:** 8" Multi Layer Mineral (MLM) fibre **AMPLIFICATION:** LF 250W peak (Class D), MF 70W peak and HF 20W peak (Class A/B)

Flexible monitoring that keeps Adam's mojo

Adam Audio's recently revamped A series monitors couple its classic X-ART (Extended Accelerated Rhythm Technology) tweeters with a new glass fibre HPS tweeter waveguide, newly developed MLM woofers, onboard DSP and Sonarworks integration in order to deliver a highly flexible monitoring solution that retains Adam's classic mojo.

Up for review is the flagship 3-way front-ported A8H. By default it's a horizontal configuration monitor and the cabinet design and layout means it comes in specific left and right versions. However, much like other Adam monitors, the tweeters can be unscrewed and rotated through 90 degrees to position them vertically. At 38cm wide and over 13kg these are biggish monitors. Most controls and connections are round the back. XLR or RCA inputs are joined by an Ethernet socket for remote monitor control. Back panel options include level (+/- 12dB), 4-band room adaptation and three voicing positions. The selectors have green LEDs for all button positions, so you can see settings at a glance.

In terms of onboard EQ (room adaptation) you have four choices – bass, desk, presence and treble – each offering various cut or boost settings at their specific fixed frequencies. In my medium-sized control room I cut the bass (-2dB) and desk (-2dB) as per the manual's suggestions, but I didn't feel the need to modify anything else. In addition to room adaptation, the A8H includes three 'voicings' which influence the overall sound. The default (Pure) is the most neutral or flat setting, whereas UNR (Uniform Natural Response) is closer to Adam's AX series. To my ears this has more low end and slightly enhanced upper mids. Both options can be used in conjunction with the room adaptation EQ. The third option (External) is used with an Ethernet connection and Adam's A Control software for remote control of settings.

The A Control software replicates all the back panel options and also opens up a more comprehensive 6-band parametric EQ that overrides the other tone settings. With shelf, peak, high and low-pass filter shapes, +6/-20dB gain and 20Hz to 20kHz frequency range, you can adjust the speakers however you like. There's also further overall gain (+12/-60dB) and positive timing delay (up to 5ms). As mentioned, the A8H can apply its own Sonarworks Sound ID reference curve, which was a simple process.

The A8H is a big loud monitor, and when you turn them up those front ports really shift air. Nevertheless, the all important mid range is ably handled by the 3-way design and as ever the ribbon tweeters deliver a silky smooth top end that's not fatiguing.

They're also great at lower volumes, so if you can accommodate their size, the forward ported design and excellent tweakability make them a great choice for any space. Despite these being by far the most flexible Adam monitors I've used, I really didn't feel the need to tweak them that much, which no doubt makes them perfect for coupling with Soundworks Sound ID room correction, where more extensive tone shaping is applied. All told, these monitors are really impressive. FM

FM VERDICT

9.1

A powerful 3-way monitor ideal for larger rooms, but also highly flexible. Perfect for a variety of modern production environments

THE PROS & CONS

+

Loud monitors with powerful low frequency delivery

Silky smooth top end

Flexible onboard EQ and voicing options

Additional features and remote control via A Control software

Soundworks Sound ID support

–

Large and heavy

Caelum Audio Choric £49

The British developer aims to put a new spin on a classic effect. **Si Truss** skips to the chorus

CONTACT **WHO:** Caelum Audio **WEB:** caelumaudio.com **KEY FEATURES** **FORMATS:** PC/Mac (Native Apple Silicon support). AU, VST3 & AAX . Also compatible with iOS & iPadOS. Requires iOS 11 or higher. Standalone and AUv3. **APP STORE PRICE:** **£11.99**

British developer Caelum Audio has only been active for a handful of years, but has already made a solid impression with a run of effective but affordable plugins. Choric is the company's latest. It's a flexible and creative take on classic chorus, unison and ensemble effects, presented in a straightforward, single-window UI.

The signal flow breaks down into several sections. The first is a resonant input filter, which can function in low-, band- or high-pass modes, or be bypassed completely. Filtering is applied directly to the audio input, with controls to adjust the cutoff and resonance.

Post-filter, the signal feeds into a central section where the main action happens. This comprises modulation and pitch shifting. The modulation section contains the standard parameters you'd expect from a chorus. Choric goes deeper than many bread-and-butter effects though, with tools to fine tune the character of the effect.

The Looseness parameter can apply wonkiness to the timing of the effect. There's also a Spread control for moving the voices out across the stereo field. Choric also allows for the chorus modulation to be synced to project BPM, as well as offering an assortment of basic LFO shapes to adjust the shape of the modulation, with sine, triangle, saw, inverse saw and random options.

> My one disappointment is that there are no modulators beyond the main one

There are also three characteristic switches. Dark rolls off some of the high end of the chorus, independently of the input filter. Warm adds a subtle saturation boost that can impart a touch of analogue-like character, which works great paired with the Looseness parameter. Finally, Flip CH inverts the right channel of the modulated signal for added width.

The pitch shifting section can be used to apply a shift of up-to +/-12 semitones to the modulated signal. There are controls here for setting the pitch shifting range in semitones, plus the amount, which dictates how much of the modulated signal is affected. Choric also has a Preserve Transients function, which makes the shift sound less unnatural, particularly for vocals and percussion.

The output section has a master dry/wet control, a gain control, and width parameter, which can boost or cut the side signal relative to the mid.

As chorus effects go, there's a lot to play with here, and Choric is at its best when pushed into weird and creative applications. I particularly like what it can do to synth pads and ambient textures – with a healthy dose of pitch shifting and some characterful modulation, it's possible to add moving layers above or below your source sound that can really add depth. It's a lot of fun to apply to drums too, using the filter to target just high or low elements.

Disappointingly there are no modulators beyond the main one. I had a lot of fun creating patches by sweeping the input filter cutoff and pitch shifting amount to create dynamic effects. Obviously most DAWs will allow you to automate or modulate this externally, but it would be nice to be able to set it up within the plugin. That aside, this is a fresh and fun take on a classic effect. **FM**

FM VERDICT

8.2

Choric is a fresh, creative but easy-to-use take on the more classic chorus and ensemble sounds

THE PROS & CONS

+

Combination of filter and pitch shifting is great for targeting effects

Clear and easy-to-use UI

Also available for iOS AUv3

–

Modulation for the filter/pitch shifting would be nice

Røde NT1 5th Generation £265

This long established mic has had a significant upgrade. **Jon Musgrave** sees what's new

KEY FEATURES **CAPSULE:** 1" true condenser **PICKUP PATTERN:** Cardioid **FREQ. RANGE:** 20Hz–20kHz **OUTPUT IMPEDANCE:** 100Ω **MAX. SPL:** 142dB SPL **EQUIVALENT NOISE (A-WEIGHTED):** 4dBA **SENSITIVITY:** 25mV @ 94dB SPL (+/- 2dB @1kHz) **POWER:** 48V phantom or 5V USB **CONNECTION:** XLR or USB-C **FINISH:** Black or Grey **INTERFACE:** 48, 96, 192kHz, 24-bit / 32-bit float **ONBOARD PROCESSING:** HPF, compressor, gate, Aphex exciter and Big Bottom

THE PROS & CONS

+

Box includes everything you need to get started

Integrated USB interface with 32-bit float option

Clever dual-purpose XLR/USB connector

Very low self noise

–

Integrated USB interface doesn't support 44.1kHz sample rate

Integrated USB interface has no minimal latency monitoring facility

Røde's NT1 is one the most popular affordable large capsule cardioid condensers available and this 5th Generation model is its most innovative yet. The bundle provides everything you need to get started. In addition to the mic, you get a suspension cradle with integrated pop shield holder, a pop shield, storage bag, 7m XLR cable and a three-metre USB-C to USB-C cable. That last aspect is significant, as the NT1 now incorporates USB interfacing, so you can connect it to your computer without an additional audio interface. The mic uses the same 1" gold sputtered HF6 capsule as its predecessor, although powering is now 48V (not 24 or 48V) or 5V via the new USB connection. Output sensitivity (25mV/Pa) is lower than before, while self noise is slightly improved (4dB A-weighted).

The integrated USB interfacing uses a cleverly designed dual-connect XLR/USB-C socket which is much slicker than a body-side USB socket. There are no on-body controls, but the mic is plug-and-play so applying gain to the onboard Revolution preamp may be available directly in your DAW. To access NT1's further features, you install Røde Central (Mac, PC, iOS, Android). Gain (0-60dB) is joined by Aphex-powered effects including a high-pass filter (75 or 150Hz), compressor, noise gate, Aural Exciter and Big Bottom. The A/D interface delivers impressive specs, with high sample rates (48, 96 and 192kHz) coupled with 24-bit and 32-bit float functionality. This means that if your DAW can record audio at 32-bit float, and assuming you don't exceed the capsule's maximum SPL, audio won't clip.

> If a product reaches fifth generation the maker is doing something right

As you'd expect from Røde, build quality is excellent, and although slightly lighter than the previous version, the Aussie-built mic sports the classic NT1 shape and capsule grille. The cradle with integrated pop shield mount and shield is very handy, and the shield itself is a decent 2-layer design. One slight frustration is that the shield can only sit opposite the mic stand elbow and not to the side. I found the USB interfacing worked seamlessly and, once set up for 32-bit use, I was able to clip the recording and then use the file gain in my DAW to restore the unclipped waveform. Alas, one downside is that 32-bit mode disables all the onboard processing. There's also no 44.1kHz option and no minimal latency monitoring.

The NT1 delivers a reasonably neutral response with a slight lift in upper frequencies. There's a noticeable proximity from about 10cm, and the mic handles plosives very well beyond about 20cm. The polar pattern isn't too tight and rear rejection quite good. Sonically, it's not the most exciting mic but it's neutral enough for a variety of applications and, as noted, it's very quiet.

If a product reaches its fifth generation the manufacturer is clearly doing something very right. **FM**

FM VERDICT

8.9

With integrated USB interfacing, 32-bit float support and impressive noise figures, this is an excellent budget choice

Arturia Rev LX-24

99€

The French brand adds a digital classic to its reverb line. **Si Truss** flexes the Lex

CONTACT **WHO:** Arturia **WEB:** arturia.com **KEY FEATURES** Algorithmic reverb plugin based on the Lexicon LX-224. Formats: VST, AU, AAX, MKS

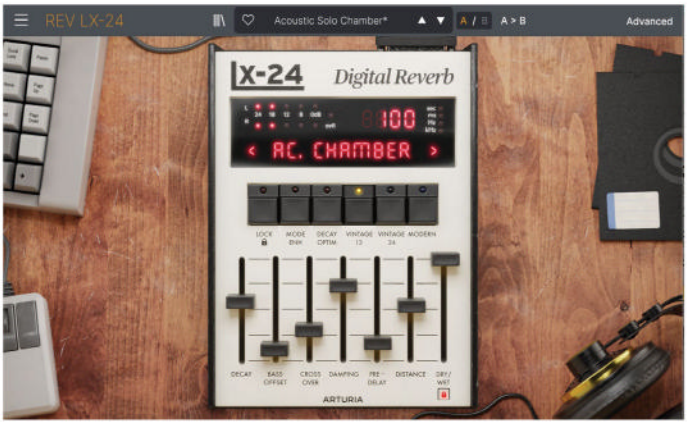
Arturia's run of vintage effect emulation continues apace. Having introduced several classic distortions to its FX Collection last year, the French brand has now turned its attention back to reverbs, adding an emulation of the Lexicon 224 to the line-up.

First released in 1978, the original 224 was part of the first wave of digital studio reverb units. It became one of the defining effects of its era and remains popular today for its distinctive spatial tones – its Concert Hall and Plate modes, in particular, were all over '80s music, and remain an instant way to replicate the sound of that era.

Arturia's recreation sports two UI modes. The first features a stylish graphical representation of the original unit's distinctive, fader-equipped LARC remote control. The LX-24 emulates the original's same eight reverb algorithms, although the control setup is a little different. Here the seven sliders control reverb Decay, Bass Offset, Crossover, Damping, Pre-Delay, Distance and Dry/Wet. Of these, Bass Offset lets users independently adjust the decay of the bass frequencies below a cutoff point set by the Crossover control. Distance alters the position of a virtual microphone, creating a sense of space.

Above the sliders are a set of buttons that can be used to adjust the character of the effect and select between emulations of the original's A/D converters. Here, Mode Enhancement can add a modulated pitch shift to the reverb, while Decay Optimization will cause the reverb to adjust its response based on the incoming audio signal. Vintage 12, Vintage 24 and Modern buttons switch between emulating the 12-bit or 24-bit converters of the original – which filter out higher frequencies and, in 12-bit mode, add an audible noise floor – and a clean mode.

The second UI screen is the Advanced View. Rather than simply offering more advanced features, in the way that some Arturia plugins have done, this screen offers users a more modern way of interacting with the effect as a whole. For example, we get the same controls for Bass Offset and Cutoff, but here they've been overlaid onto a spectral analyser for better visualisation of affected frequencies.



There are deeper controls for adjusting the pitch shift applied by the Mode Enhancement, plus additional control over reverb diffusion. The Advanced View also adds options such as input filtering and distortion, along with tremolo, gate and ducking functionality, plus brightness and stereo width controls.

As with other Arturia effects, it's all slickly designed and sounds fantastic, although the results are perhaps less distinctive than those achieved via other FX Collection plugins. The LX-24 is already a widely replicated reverb; there are direct clones out there from the likes of UA and Native Instruments, but its influence can be heard in countless algorithmic reverbs that have followed in its wake.

Arturia has been wise to not stick religiously to the original's design though, as it's in the Advanced View tools that the versatility and character shine bright. **FM**

> Arturia has been wise to not stick religiously to the original's design

THE PROS & CONS

+

Stylish and slick dual-mode UI

Updates the original's functionality in inventive ways

Sounds excellent

–

Similar sounds can be found in rival algorithmic reverbs

FM VERDICT

8.4

Look beyond the retro-UI, and the LX-24 offers a fresh and capable new take on a classic reverb

UVI Percussion Factory 149€

UVI are back again with another sample-based Soundbank. As with their previous outings, this can be used within their (premium) Falcon instrument or (free) Workstation host. Although the name 'Percussion Factory' spells out the remit here, the subtitle 'Creative Rhythm Designer' provides more of a clue as to the broader intent.

The main instrument screen gives a good overview of things. The 500+ presets are selected from the drop-down menu, with the eight percussion instruments that make up the sound element of the current preset shown below. Above each is a simple diagrammatic representation of its pattern (and it's good to see multiple length patterns supported here). At the bottom are six controls for adjusting global parameters in real-time. These allow you to alter step length, dynamics, simplify patterns, apply swing, and tweak reverb and tonal balance, and are surprisingly effective if you want to work quickly and avoid diving into the other pages. Keyboard mapping is shown along the lower section of the window, with keys available for triggering individual sounds, 'per-part' sequences or the single 'all-parts' pattern. Initially I wondered why there wasn't a way to have multiple patterns triggering the full gamut of sounds – these are often multiple pattern slots spread across the keyboard in other rhythm-based plugins.

However 'Decimate', the aforementioned control, (which I initially thought might be a distortion/bit-crushing effect) does a good job of altering pattern complexity to suit different sections of a track. For the terminally lazy there is also the 'magic wand' button for generating new presets. This is far more than a simple randomisation control, with each successive press delivering a new sound set and very usable pattern. It even names each new pattern. I stopped when I got to the creatively named 'Chubby Car Enthusiast'!

So, even if you don't delve any further there's a lot to like, but there is plenty on offer for those who want to dig deeper and value more nuanced control. Each sound (selected from over 1000) can be tweaked for pitch, via the Amplitude and Filter sections, through four insert effects (Crusher, Flanger, Frequency Shifter and EQ) and on to the main outs where global effects (Drive, Maximiser and EQ) can be applied. There's also an adjustable IR Reverb and Delay available in the two effect send slots.

Back in the edit panel for each sound you can create sequences with different velocity, note divisions (for sub-step repeats), pitch, gate length and skip probability per step.

If you aren't satisfied with factory sound content then user samples can be dragged into the instrument (though there is no onboard trimming or editing). One advantage of the factory samples is that they include an Auto Align feature whereby playback is aligned to the main transient of a sound (though every sequencer lane also has an adjustable positive/negative offset). In terms of timing manipulation Percussion Factory has a global Swing feature, but what really makes it excellent is that different flavours of swing are selectable by choosing from the various groove profiles.

I found Percussion Factory a lot of fun to use, but it also consistently delivered some excellent and highly usable organic grooves. ***Bruce Aisher***

uvi.net

VERDICT 9.5

Sample Magic – Jazz Hop 3
From $7.99/month

The latest journey into jazzy hip-hop happenings from the SM camp, collecting 370 slick samples for all of the cool cats in Kangol hats.

Boom-bap business meets be-bop hooks in this well attended meeting of musical minds.

The result is a phat stack of punchy drum sounds and programming from the rap fanatic side of this the well crafted collection and all the smooth, deep grooves from the jazz head crew.

Taking in Roy Ayers-level vibes, laid-back basslines, and wood and brass section stylings to noodle over for days, some come as they are, others are chopped and re-sampled to taste.

And it's all run through the right gear, to give it the unmistakable tape warmth, top-end mic clarity, and overall style and integrity that this type of street soul needs to walk the walk. *Roy Spencer*

splice.com

VERDICT 9.0

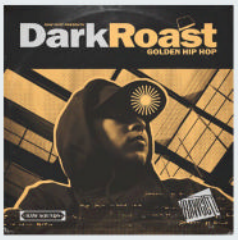
Splice Originals – Draco
From $7.99/month

Fire-breathing drill and trap loops and one-shots for those brave enough to enter the lair and plunder the gold inside.

Helmed by super producer Ray Luminais (whose credits include everyone from Lil Wayne and Boosie to Raw Dizzy and Ambre), this set of song-starters covers all you'll need to make your own beastmaster beating beats. There are some really big, stacked melodies, resampled chords, and tough, meaty 808 workouts and FX loops in a healthy heap of heavy, drum-focused fare, including monster kick and clap loops. It's savage stuff, sure to have you serving up ice cold tracks and red hot songs. *Roy Spencer*

splice.com

VERDICT 8.0



Raw Cutz – Dark Roast £29.95

Coffee breaks and caffeinated keys from the always piping hot Raw Cutz hip-hop sample stable in this atmospheric pack. There are live drum hits and loops, dubbed out full-bodied grooves, and rich and dark vocals run through some warm and welcoming chains to choose from, as well as a nice range of styles and moods across the menu to check out. The craft is never in doubt over here. And fans of the label will be back once more, pulling out ripe Rhodes licks, tight and upright bass plucks, fly guitar sounds, trumpet trills, and other jazzy flavours, as they brew up career-best beats and treats using this laid back collection.

Roy Spencer

loopmasters.com

VERDICT 7.0

Samplestate – Code Red Techno £29.95

Alarm-bell beats, packaged here in terms normally reserved for emergencies that'll have you checking in on the safety of loved ones. And, rightly so. This 544MB collection of bomb threat bass and massive city-wide explosion drum loops will have you running… to the clubs. Inspired by the mushroom cloud sounds of Adam Beyer-types, and the musical missiles they drop with pinpoint accuracy on label like Drumcode. All the samples in this suspiciously smouldering pack are pure techno track ammo. Pick through the rubble of hundreds of synths, rumble FX and atmospheres, drum bits, construction kit loops, and more besides.

Roy Spencer

loopmasters.com

VERDICT 8.0

Audiotent – Pure Snares £21

The world of clap samples enters the realm of the perfect snare. As with the rest of the Pure series, each sound in these expertly curated collections has been wrung from an intimidating shelf of analogue gear. Iconic drum machines, Eurorack modules, and percussive synths like the Roland TR-608, Intellijel Plonk, and Moog's Drummer From Another Mother, all get a work out. Resulting in a ton of mutant snare sounds that snap, thump, punch, and ring, just like they should. Props to the processing, too, with backslaps reserved for the Neve 88RLB Preamp, on hand to tune out unwanted frequencies and level up the heat and impact.

Roy Spencer

audiotent.com

VERDICT 8.0

UNDERSTANDING:

Monitor placement

There's a lot more to effective monitoring than simply buying the best products you can afford and plugging them all together. Setup plays a huge part in ensuring you get the most out of your equipment and environment

POSITIONING YOUR MONITORS: 7 EASY STEPS

ORIENTATION

1 Decide an orientation within the room. If your shortest dimension is around four metres or more, consider setting up so that the width is the longest dimension. Space to the sides of the monitors helps support stereo imaging and reduce the effective strength of side wall reflections.

Setting up longways allows for a greater depth of bass trapping at the rear of the room and provides more space at the front to keep your listening position out of the middle third of the room.

WALL SPACING

2 Decide how close to the front wall (the one you face) the monitors will go. Unless your room depth is over ~9m it's best to keep the distance from the wall to the front of the monitor 1m or less, but don't let the rear of the monitors get closer than 10cm to the wall. If ported to the rear, a gap of 30cm or more is better.

SMALLER ROOMS

3 For width spacing, setting the spacing between 1m and 1.6m, measuring from the centres of the LF driver cones, gives you plenty of stereo image width in small and medium-sized rooms.

TRIANGULATION

4 Your listening position should be the point of an equilateral triangle with the monitors. Using the above spacings, this position will be around 0.87m to 1.39m back from the fronts of the monitors. Your head should be equidistant from each of them, a distance that is the same as their LF driver cone spacing.

FACE-TO-BASS

5 If you haven't already, turn the monitors in to point directly at your head. This should mean that, by virtue of the equilateral triangle, they form a 60° angle (each 30° from your line of sight). Make sure the monitors are facing flat. If you want to raise them above your seated head height, keep the angle shallow (max. ~15°).

CO-VIBRATION

6 Mount your monitors with some form of decoupling to prevent them transmitting vibrations elsewhere. Dense/heavy speaker stands, such as stacked concrete blocks, work well. Sitting the monitors on metal spikes reduces their contact surface area and thus attenuates the transmitted energy. Foam pads are also great for decoupling. Combining dense and springy materials can be a great approach and is often cheap, too, as bricks, blocks and foam are common. Avoid mounting monitors on the same surface.

RAISE THEM UP

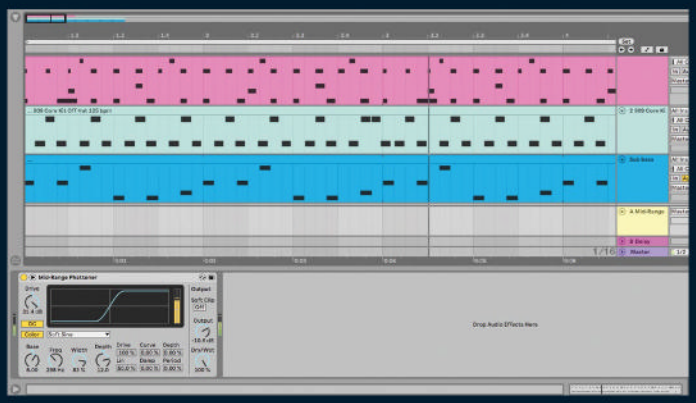
7 Seating your monitors on or close to flat surfaces will add more phase shift and cause a degree of comb filtering. The more the monitors are raised up from these surfaces the less pronounced the comb filtering, though you won't be able to avoid it completely. Try a few positions to find a compromise.

Quick effects tips: Part 2

Get more out of your productions with our series of quick-and-dirty effects tips

ADD PRESENCE TO A SIMPLE BASS

Sine wave basses are great for subby low-end reinforcement but sometimes they lack a little weight, creating a frequency gap between the bass and the lower mid-range. You can't open the filter on a sine-wave bass as there's no upper frequency content present in the sound. Instead, send the bass to a distortion effect via an auxiliary and configure settings to hit the bass and 'disperse' this to overdriven higher frequencies. Why do this on an auxiliary rather than 'in-channel', via an Insert? If you use an auxiliary, it's much easier to balance the dry original sound with the distorted treatment and, using automation, a doddle to vary that relationship from one section of your track to another.



GATE EXPECTATIONS

Heavy reverb presets with very long times can end up producing sounds with little to no dynamics in them. Using gates and modulation effects on patches like this can inject some life back into the proceedings.

RE-LEVEL

Effects like drive and distortion add loudness, so pull back your device's output gain to compensate. It's easy to confuse something sounding 'better' with it merely being louder. When you bypass the effect, you'll hear how the signal has changed. This is particularly important to try and keep an eye on when one effect feeds into another, as an increase in level caused by a change to the first effect, such as a distortion, could have a big impact on the response of the next, like a limiter or a compressor.

VARIED 'VERBS

Vary the length and intensity of reverbs throughout your mix. Contrast between spaces will help build a more interesting and compelling mix. Use everything from close ambience through to large plates and halls. Try to avoid using the same reverb send for everything.

WANT MORE TIPS?

Come back for more next issue, and revisit our playlist of 20 video synth tips – in a handy phone-friendly format – at: **bit.ly/quicksynthtips**

STANDALONE MUSIC MAKERS

Ableton Push

From $999

Full Review: FM397 | Push finally lives up to Ableton's vision of controller-as-instrument, and standalone mode is a great new way to use Live

Akai MPC Key 61 £1,699

Full Review: FM387 The MPC takes the winning format of the MPC Live and builds it into a keyboard workstation. It's a logical, winning concept and well-executed

Akai MPC X SE £2,050

Full Review: FM397 This is a fine update to the original MPC X – the new instruments and effects are really excellent. The retro look is very stylish too

Roland MC-707 $999

Review: FM349 It lags behind some rivals on the sampling front, but on the whole the 707 is a powerful and well-designed groovebox. A welcome return for the company's MC line

NI Maschine+ £1,099

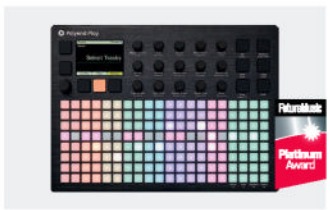
Review: FM363 There are some limitations, but Maschine+ delivers the core Maschine workflow in standalone form: inspiring, creative and fun in the process

HARDWARE GROOVEBOXES

Roland SH-4d

£549

Full Review: FM394 | Roland have released a lot of retro-inspired gear in recent years, but this synth/drum combo is a real sonic playground



Polyend Play $799

Full Review: FM384 Play's capabilities aren't quite 'DAW-replacement' level, but the sequencing workflow and live performance tools are some of the best going

Elektron Syntakt £849

Full Review: FM392 Building on the successes of multiple other Elektron instruments, Syntakt is a top quality analogue-meets-digital groovebox with a lot of power under the hood

Polyend Tracker £699

Review: FM357 Despite its retro influences, Tracker is less esoteric than it first appears. This is a sleek, well-designed hardware sampler that's both fun and inspiring

Novation Circuit Tracks £360

Review: FM369 Circuit Tracks is an excellent update to one of the best value hardware instruments on the market. MIDI, samples and synths in one bargain box!

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so your EQ doesn't have to

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